

PERSONAL COLUMN

What have schools to do with riot? It has been widely remarked that many of those involved in the recent urban disturbances – "uprisings" if you take a youth-centred view – are of school age. Ergo, a swelling chorus can be expected to chant, today's schools are to blame.

Maybe. But a deeper educational failure lies with those who were selectively and expensively educated in the good old days in the good old ways and are now this country's policy-formers or official decision-makers. Why can we not grasp what is at issue and deal with it more intelligently?

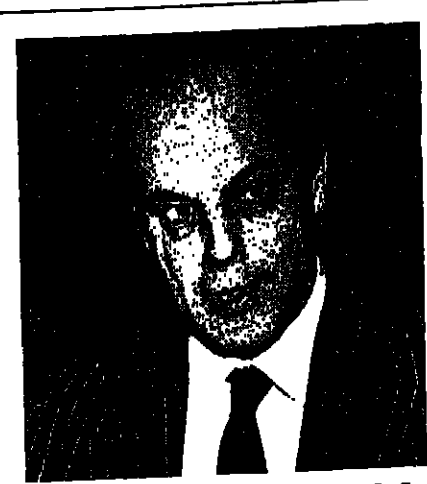
For riot presents no great mysteries. A "tumultuous disturbance of the peace" has four elements to it. When all come together at one place and time, riot explodes.

The first element is the existence of a well-defined group. Such a group may be defined by itself (like a group of football supporters) or by others as well. So membership of the group, however proud its members may be to belong to it, is compulsory. Black Britons are defined in this way. But, however it originates, the essential point about a group is not its origins but the fact that it exists, in its own eyes and in those of others.

The second element in riot is that the group involved should share a strong sense of injustice. For the purposes of riot, it does not matter whether the injustice is real, partly real or largely imagined. A police "victim" may be drinking tea with his lawyer and the referee may have seen that the "trip" was not a trip at all. But if a group believes someone is being beaten up in a police station or that the referee deliberately refused the penalty that might have won the cup, that is what matters. For the purposes of riot, injustice is in the eye of the beholder.

The third element in riot is that the group which perceives itself, perhaps through one or more of its members, to be the victim of injustice has also to believe that nothing is being done to remedy matters. Once again, it is immaterial whether that belief is correct or not. What matters is the absoluteness of the belief in the absence of remedy. Furthermore, there is an easy transition from the belief that there is no remedy to the belief that it is deliberately caused.

Take racial discrimination. If it is known that many employers discriminate against black youngsters and that nothing effective is being done by those who could remedy matters, those



PETER NEWSAM

The seeds of riot

'Within schools and l.e.a.s there is much to be done to remove injustice and sharpen perception'

who suffer discrimination see discrimination as being deliberately imposed.

The fourth element in riot is the most obvious. The conventional metaphor to describe a group that perceives itself to be the victim of unremedied injustice is "dry tinder"; so the fourth element in riot is the spark that sets the tinder alight. That spark may be a sudden action which, in other circumstances, would cause no problems.

The Kerner Report, which meticulously documented the mid 1960s riots in the United States gave a series of examples of this. Even turning off a hydrant in hot weather could ignite group anger and suspicion.

More typically, as in Miami, the spark was provided by the decision of a court, where remedy is of all places to be sought, or by some police blunder. That "blunder" may, of course, be no such thing. It may be a genuine attempt to carry out a duty under the law. But if the other elements of riot are present, any precipitate action is open to instant interpretation. No one has roughed up black youngsters in a fire station, so far as I know. But, in some circumstances, both in America and Britain, the fire service and the police are seen as one.

Each of the elements of riot suggest how riot can be avoided. Each also has an educational component. First, a group's perception of itself.

One way of dealing with this is to break up the group and, as it were, send it back home. That may serve for a football crowd but it cannot apply

to British citizens who happen to be black.

But there is a well-documented role for schools here: to accentuate, in the words of the song, the positive and, so far as this derives from prejudice or inadequate understanding, eliminate the negative in the way the group is perceived by itself and others. Schools, all schools, have work to do on the positive side of a multi-ethnic society. Schools educate future policemen as well as those they will police.

Second, the way to remedy a sense of injustice is to be seen to be just. There are no mysteries here. Take racial discrimination again. In housing and employment, with a wealth of research evidence behind us, we know what needs to be done. And we know it is not being done. Education is more difficult. But, even here, some things are obvious: from provision for under-fives and increasing the number and status of black teachers all the way to straightforward good teaching of pupils from ethnic minorities.

Third, the sense that injustice has no remedy. Obviously, within school and without, the provision of visible remedy helps: appeal systems, consultative arrangements and facts. It is no use reducing the number of black children suspended if the black community at large still believes the numbers are disproportionately high. Similarly, to allow consultative arrangements, between parent and school or between police and community, to break down is positively dangerous. The answer to the "consultation is a farce"

argument is to improve it; not abandon it. Fourth, the spark itself: how is this to be dealt with? Preferably by removing the tinder – sparks fizzle into nothing without it. But while injustice without remedy is the perception of any group, from mining village to inner city estate, the tinder is there. And above all, the police are seen as the very embodiment of the lack of remedy; agents for enforcing injustice.

There is an irony here. Since the Scarman Report, the police have arguably done more than any other agency to try to put things right. They may have failed and still be failing. But to concentrate on that failure is to divert attention from more important failures. Police failures become disastrous only if injustices that form are left without remedy.

So how does this leave the question of what schools have to do with riot? Within schools and local authorities there is much to be done to remove injustice and sharpen perception. There is no better cure for rumour, that can be a disturbance into riot, than the attention to fact and evidence and sensible methods of argument that most schools seek to inculcate.

But, were all Swann's recommendations to be acted upon, it would remain true that most of the problems that lurk behind riot lie outside schools. And while there are still groups in society confronted by injustices they believe to be without other remedy, "tumultuous disturbances" can occur at any time. And, in the short term, there is not much schools can do about it.

NEXT WEEK

Confessions of a quiet militant
Anne Jarvis argues that teachers are still the biggest single factor for success

Promotion of a modest man
Sarah Bayliss profiles Jim Rose, the new chief TMI for primary education

Arts
Philip Davidson on the first year of the Guildhall Music and Communication Skills Project

Computers in Education
Department of Industry outlines scheme; hardware developments; choosing good software

NOTICEBOARD

PEOPLE...



Professor Greaves Davies (pictured), department of metallurgy, University of Sheffield, to be vice-chancellor of the University of Liverpool from next April.
Dr Chris Beville to be deputy director of education for Nottinghamshire. He was previously principal inspector.
Professor Robert Wilson, Professor Brian Thrush and Professor Ian Gass have been appointed to the Natural Environment Research Council, Wing Commander John Tawey deputy controller of the Service Children's Education Authority, to be a senior consultant with ISIS International, in succession to Mr A. Mollie.

CONFERENCES...

November 2

Educational Studies, 17 Northam Gardens, Oxford from 10.45am to 4pm. Speakers include HMIs John Slater and John Hamer. Fee £4.50. Application forms from Adrian Allen, Development Officer, Historical Association, 59a Kensington Park Road, London SE11 4JN. Places limited to 60. Closing date October 25.

November 9
Association for Behavioural Approaches with Children conferences at the University of London. Topics include special needs action programme; a behavioural approach to remedial reading using parents and peers; working with abusive children and parents; and assessment of disruptive behaviour. Details from Martin Scherer, 50 Sharnett Street, Kennington Park, London SE17.

November 11
Nuclear issues in the classroom: a constructive approach is a teachers' conference to be held at the University Centre for Teachers, Institute of Education, 20 Bedford Way, London WC1. Organized by Cat Whittle, Barbara Tizard, Catherine Kelly and John McConnell. Closing date for applications is October 23.

November 14
Meeting the special educational needs of children with disabilities: a RADAR conference at the Royal Dalrymple Assembly Rooms. Speakers include Elizabeth Rowe, Bill Bakhouse, Dr Gordon McGregor, Dorothy Lynes, Philippa Russell, Freddie Green and Christopher Trickett. Fee £15. Details Amanda Osborne, RADAR, 25 Mortimer Street, London W1N 8AB.

series. Tunde Longmore, BBC Education Officer, will speak and an opportunity to visit the exhibition, London Transport at War. Details from John Freeborn, Keeper, London Transport Museum, Covent Garden, London WC2E 7BB.

EVENTS...

October 23
The third Joanna Palmer Lecture will be given by the Revd David Evans, general secretary of the Samaritans, at 2 pm in the Renold Building, UMIST. Admission free.

November 9-16
Lancashire Polytechnic observatories in Preston will be open to the public during National Astronomy Week and will co-ordinate Comet Halley information for the public. Lectures and displays about comets and the solar system throughout the week.

November 12-13
The Child Abuse Prevention Programme is holding a workshop on preventing child sexual abuse at the Institute of Child Health, London WC1. Cost is £80. S.A.s. for details to CAP Workshop, 30 Windsor Court, Moscov Road, London W2 4SN.

November 13
National Caring Association seminar in the Pavilion Gardens, Burton, Derbyshire will review caring, care leadership and care conservation. Details from NCA, c/o Wharfedale Manor, Dent, Sedburgh, Cumbria LA10 0RE.

COURSES...

October 23

by Stephen Perrott. Details from Audrey Mitchell, Room 265, University of London Department of Extra-Mural Studies, 26 Russell Square, London WC1B 5DQ.

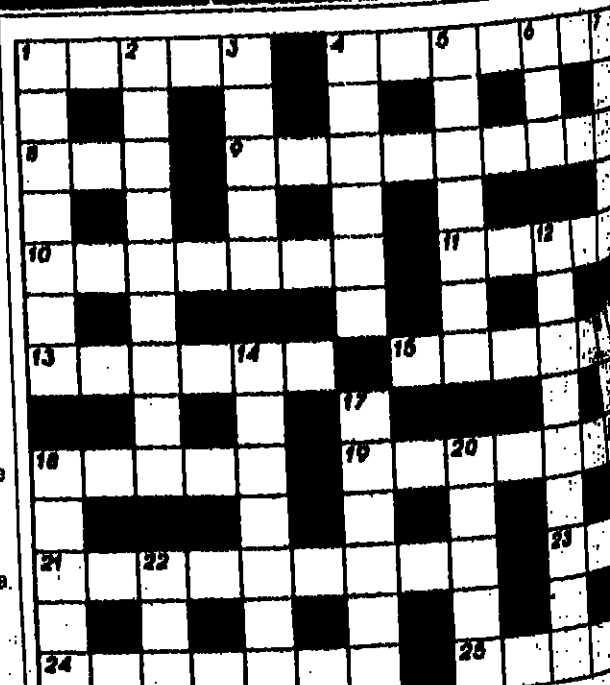
October 29
Project Fullemployment Clarkenwell offers training to young unemployed who wish to set up their own business. An eight-week part-time course from October 29, and a 16-week full time course from November 4. Both courses free. Details from Nigel Wilkinson or Laurie Thompson, Unit 120 Clerkenwell Workshops, 131 Clerkenwell Close, London EC1R 0AT (01-251 4083).

November 2
Children with Problems, a day course at Ipswich Teachers' Centre organized by Eastern Region, College of Preceptors led by Dr Una Maguire. Topics include counselling on problems of theft, truancy, aggression, school-phobia, etc. Details from the regional secretary, Woodland View, Lower Road, Holme Hale, Thetford, Norfolk IP26 7EB.

INFORMATION

Brunel University
For the university's 20th anniversary, Richard Morris, industrial training officer, is planning an exhibition on what is now called Runnymede campus, but which was previously Brunel's Training College, Coopers Hill Engineering College and the Royal Indian Engineering College. Former students or their relatives with photographs or examples of work or memories of

No 225 CROSSWORD by Ruth



ACROSS

- 1 A buzzer that doesn't work (5)
- 4 Quickly knock but to no avail (7)
- 6 Undermine vitality (3)
- 9 A great man in history (9)
- 10 Name one variety of flower (7)
- 11 Instruments of love in high order (5)
- 13 The game's finished for a small number on the point (2,4)
- 15 Cleverly taking a

DOWN

- 1 Poor Dad is in contempt (7)
- 2 He may get a poor press, spitefully enough (3)
- 3 Organizing ten or writing poetry you
- 7 Measure of length of time (4)
- 13 Pretty little (4)
- 14 State of mind (4)
- 16 Stone thrown at a person (4)
- 17 State of mind (4)
- 18 A person (4)
- 20 Student (4)
- 23 One of the seven (4)

Educational Supplement

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Unions will resume talks after teachers' panel shake-up

by Richard Garner

Teachers' leaders are planning an immediate resumption of pay talks once Sir Keith Joseph's planned shake-up of their negotiating team is announced – having first lowered their sights on a settlement figure for the 1985 dispute.

Close alliances are being formed between the rival smaller unions to press for a speedy interim settlement. These unions are also aiming to take away the chairmanship of the teachers' panel from the National Union of Teachers if – as is virtually certain – Sir Keith removes the NUT's stronghold on teacher pay policy early next month.

The smaller unions are prepared to accept a much lower base than the NUT for a settlement of this year's dispute. Some representatives of the second largest union, the NAS/UWT, are talking about a 6.9 per cent on the salaries bill which would be weighted towards the end of year to increase teachers' pay by 8 per cent by then. The rest agree.

This deal is not too different from the local authorities' "final" offer last week – now withdrawn – of a 6.9 per cent increase in the wages bill rising to 7.5 per cent for teachers by the end of the year.

In return for a settlement, the new teachers' panel would be prepared to enter into immediate discussions on a new pay structure as a means of restoring lost ground over pay.

The shake-up in the chairmanship of the panel would ensure the other unions a presence in future behind-

the-scenes negotiations that always act as a prelude to a pay settlement in the Burnham Committee.

In most cases, it has been the chairman and leader of the teachers' panel – currently Mr Don Winters, NUT treasurer and Mr Fred Jarvis, NUT general secretary – plus the NUT secretariat which service the teachers' side who have taken part in these secret discussions.

But the signs this week were that – whereas other teachers' unions would be happy for Mr Jarvis to retain the leadership of the panel – the chairmanship could go elsewhere.

A close alliance has been formed between the NAS/UWT and the National Association of Headteachers in the past few months. If the NAS/UWT were not to win the chairmanship, Mr Frank Mills, the most senior and respected NAHT representative on the panel could.

If the teachers' unions did vote for a settlement, leaders of the NUT believe they would have no alternative but to go along with it – even though a special salaries conference would formally register the union's rejection of it.

However, hopes of a settlement on the planned shake-up of the teachers' side have to be qualified. The local authorities said last week that their offer was only tabled providing that it

Pay dispute stories page 6

was accepted in advance of negotiations by the teachers' panel.
Sir Keith is expected to announce his plans for a shake-up early next month – although this week he said on Channel Four's *Face The Press* programme he had not finally made up his mind about them. He has proposed reducing the NUT representation from 16 to 13 – while the other teachers' unions would have 15 representatives between them.

Sir Keith's comments on the programme – that local authorities should take out court action against the teachers – has acted as a further bar to promoting a mood of compromise, say the unions.

Even the hardest-line local authority, Solihull, which was in junctions against the teachers' unions at the beginning of this dispute, is now sceptical about this option. The injunctions led to the area being singled out as the front line of strike action.



Enzo Polcetti, aged 15, one of the five pupils at the centre of the Poundswick High School graffiti row, who has been refused lessons since mid-June. His step-father Mr Duncan Davenport, who claims Enzo is not one of the worst offenders, told The TES this week he was ready to sue teaching unions in Manchester in an attempt to get his stepson back to school. Story, page 5. A pupil's right to appeal against expulsion. Platform, page 4.

Strike hits pantos

Many theatre companies are casting striking teachers in the role of wicked witch as the teachers' action threatens this year's pantomimes, *Susannah Kirkman writes*.

Scotland has been worst hit. Cumbernauld Theatre has been forced to cancel its adaptation of *A Christmas Carol* because teachers have been instructed not to supervise extra-curricular visits or activities. A sharp fall in bookings has led the Glasgow Citizens' Theatre to cut back its pantomime by 10 days.

Welsh theatres mounting set texts and Christmas shows are also suffering, according to the Wales Association for the Performing Arts, which says that school bookings have been "decimated".

In England, the Royal Theatre, Northampton, has scrapped its school performances of *The Sleeping Beauty*. And school bookings for the National Theatre's touring company have also dropped.

The Theatrical Management Association, the provincial employers' body, has asked Equity to appeal to teachers' unions for a relaxation of the boycott on out-of-school activities.

Equity is advising theatre managers to contact the teachers' employers and urge them to reach a speedy settlement. But Equity has warned its members not to undercut the teachers' action.

Top MSC official attacks 16-plus

by Susannah Kirkman

The new GCSE is an "anachronistic burden", according to a leading MSC official and former polytechnic principal.

Too much time and energy and money is being wasted on the reform of the 16-plus, writes the Reverend Canon Dr George Tolley in the autumn edition of *Economist*.

Dr Tolley, who is the MSC official heading the Government review of vocational qualifications, and who was head of Sheffield Polytechnic, says that the GCSE will condition the curriculum for decades, as GCE O levels have done. Yet it will not allow schools to keep pace with social and technological change.

A new "map of knowledge" is needed which breaks down the artificiality of single subjects, Dr Tolley insists. He condemns the current examination system as "increasingly irrelevant to the world of change".

Certificates are uninformative and for most young people, exams have more to say about failure than achievement.

Examinations have assumed an importance "transcending purpose, values and goals in education", and it is a fallacy to think that performance in written exams is a valid indicator of

personal potential, Dr Tolley writes. Dr Tolley castigates the exam boards as inert and resistant to change and suggests that they should be more accountable.

Meanwhile, pressure to postpone the GCSE is mounting. The Yorkshire and Humber Regional Examinations Board and the Welsh Secondary Schools' Association, which represents 220 headteachers in Wales, have written to the Secretaries of State asking them to delay the new exam for a year.

Even a speedy resolution of the teachers' dispute would prove too late for the GCSE to be implemented effectively "at this late stage", the WSSA told Mr Nicholas Edwards, Secretary of State for Wales.

Mr Brian Park, the Yorkshire board secretary told Sir Keith Joseph that the tight timetable for the GCSE does not allow enough time to develop Mode 3 syllabuses.

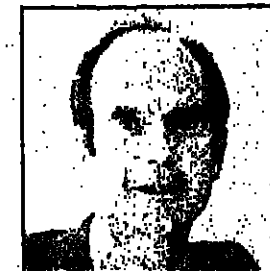
The Northern Examinations Association's deadline for the submission of Mode 3 syllabuses is January 31.

Mode 3 courses have also been jeopardized by the teachers' action, as teachers write Mode 3 syllabuses in their own time. A spokesman for the Yorkshire board said there was "only a trickle" coming in.

THIS WEEK

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The new primary HMI



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EXTRA On the high wire: educational computing



taking.
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PLATFORM

Face to face with unfairness

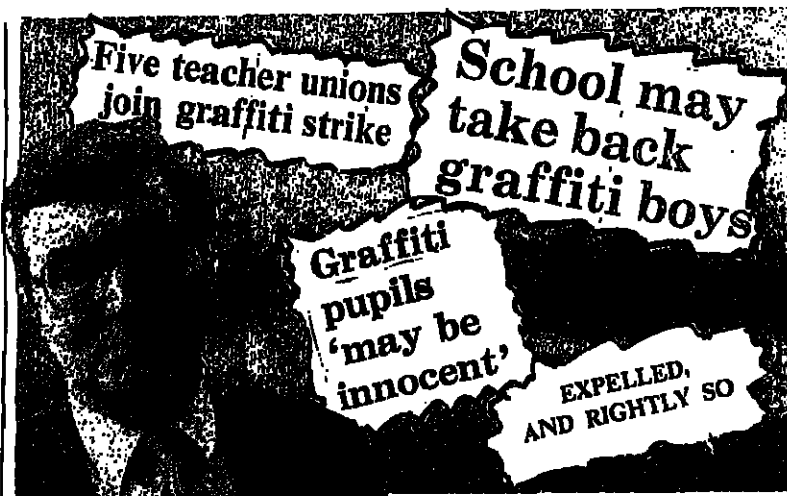
Manchester spends £200 million a year on its education service. Outside London, it is always at or near the top of the spending league for schools and continuing education. Manchester does not waste its money. HMI inspectors, among others, have tended to confirm that the spending is a considered response to very serious problems of deprivation. But it is Manchester that, uniquely, has brought out its teachers and its heads – no militant body of men and women – on strike about the Poundswick issue, which has rapidly grown from an affair to a cause célèbre.

I have never before encountered an issue that has so united both public and professional opinion. I meet few outside the circle of politicians and administrators most involved who support the education committee.

The *Guardian* published a leader: "Manchester said yesterday that its decision to reinstate the five in no way reflected any lack of concern about the seriousness of the pupils' misbehaviour or the views of the governors and teachers." Maybe not. But both insulted teachers and affronted governors find their views brushed to one side. Teachers are at the sharp end and governors give up their own time to reflect community values as best they can. The local authority – politicians and public servants alike – have so far failed to demonstrate to the teachers how best they should maintain discipline faced with burly fifth-formers who accuse them of sexual malpractice. Equally, they have failed to support governors, interested in upholding standards. Such omissions need to be remedied. Poundswick's little local difficulties could fast otherwise become a city-wide school crisis.

How about that word, "burly"? Has the leader writer interviewed the children? How subtle the equation of graffiti-writing with physical violence. No question here of antivenereal liberal values are firmly on the side of punishment, values shared by people across the political spectrum from the Socialist Workers Party (whose banners were in evidence at a demo outside the Town Hall) to the Right of the Conservative Party.

For nearly five years I was assistant education officer (schools) in the education department in Manchester and had responsibility for dealing with cases of suspended pupils. The memory of too many of those cases stays with me. There was, for example, the case of the split tea. A teacher had been going up the stairs of a school, carrying a cup of tea, and had heard a shouted insult behind him. He had turned round and, according to his statement, the cup of tea had "somehow" split over a boy three or four steps below him. The boy, who alleged that the teacher had thrown the tea over him, had physically threatened (but not struck) the teacher. The boy over whom the tea was split was not the one who had shouted the insult. The headteacher, in support of the teacher, suspended the boy. He agreed with me that it was very difficult to explain how



Poundswick five: Michael Sterne puts the case for the pupils' right to appeal against expulsion

a whole cup of tea, as opposed to a few drops, could have been spilt over the boy accidentally but could not see his way to lifting the suspension and the boy was eventually transferred to another school.

I remember, too, the case of a girl who was out of school for two years. There was some minor misdemeanour in school and she was sent home with a letter to her mother asking the mother to come into school. The mother didn't come. At regular, though lengthening intervals, further letters went. Still the mother didn't come. Every now and then the girl presented herself at school but was sent away until the mother did as she was told. Still she didn't come. Finally, after nearly two years, the mother called at the education department to enquire why her daughter wasn't being allowed to attend school. It turned out that neither mother nor daughter could read, the daughter didn't understand why mother was required at school and that the family's response to frightening looking official letters was to ignore them.

Then there was the boy with "minimal brain damage". This boy had been referred to an educational psychologist because of his general clumsiness and inability to learn to write (though he read quite well). The psychologist found that he had an IQ, as they were measured then, of 126 but referred him for further investigation of his clumsiness. Finally, it was reported that he had "minimal brain damage". No treatment was recommended – he was simply to be encouraged and helped to deal with his clumsiness. The school, though, alarmed at the phrase, "minimal brain damage", put him in a remedial class. There he stuck, making no progress for three years until, as he was about to enter his fourth year, he began to rebel. His final suspension from school came when he waved a knife at (he did not use it) a boy who was teasing him. He

though, is a ruined life. Some are permanently scarred by their experiences at school.

Where, in this, lies justice? There is a scene in *Kan* in which a good little boy, sent to the head with a message, is mistakenly stood in a line of malefactors and, like them, beaten. Most school punishments are venescent – suspensions and exclusions – can seriously affect the life and careers of those who are subject to them and are therefore to be taken seriously.

Are children subject to such punishments to be told what is alleged against them, to be given a chance either directly or through representatives to reply to the allegations against them and to be considered innocent until proved guilty, or are those rights to be truncated in the interests of good order and discipline on the unpoken assumption that what matters in maintaining discipline is punishment not fairness? Does natural justice stop at the school gate?

In the Poundswick case, the children were given a right of hearing in front of a subcommittee of the education committee and the parents of one of them hired a barrister. The subcommittee was not convinced that the case against the children was proved and so, in the English tradition of innocent until proved guilty, their suspensions were lifted.

What is being said here? Are suspended and expelled pupils to have no right to appeal? Are pupils never suspended or expelled unjustly? If there is to be a right of appeal, it must be assumed that on occasion the appeal body will make a bad or a wrong decision. Finding the guilty innocent on occasion is an inevitable concomitant of safeguarding against the innocent being found guilty.

Running comprehensive schools in inner city areas, providing both a haven and an education for despairing children, is an ordeal even for those who do it best. Too often, the difficulties are unrecognized. HMI in its reports persists in dealing with such schools as if they were as easy to run as schools in the suburbs or the counties. Except at the margins schools are staffed and resourced and the staffing structure is determined on the implicit assumption that they are all identical.

Manchester, too, has been through reorganizations in all sectors which have left wounds that are as yet unhealed. Within the public and professional reaction is an assumption that punitive regimes are essential if children are to be taught successfully. Both professional experience and research evidence contradict this assumption. Michael Rutter and his co-workers in their research published as *15,000 Hours* found that "There was a very strong and highly consistent correlation (0.92) between overall school process and pupil behaviour".

Frequent disciplinary interventions in the classroom were associated with worse behaviour as was an increased amount of corporal punishment in a school. "Group-based discipline standards" – the general expectation of

good behaviour in a school – was correlated with good behaviour.

Sometimes, in the best of schools, a suspension is inevitable. However, most of those who deal with schools and observe them closely believe that schools with high rates of unresolved suspensions are likely both to perform badly academically and to be schools with many other problems. I have never yet encountered a comprehensive school which has both a very high rate of suspensions and is in other respects a successful school. Most schools in Manchester are good schools successfully educating many disadvantaged children. Their heads' reaction reflects the difficulty of accomplishing this.

David Hart, general secretary of the National Association of Head Teachers, is reported in *Education* as having said, "Manchester has some wanting governing bodies to have any power – they believe they are the governing body. They have decided to put their foot down and say we, not the governors, are in charge. In this sense it is not unlike Bradford."

It is fatuous. The articles of government are based upon and articles of government issued by the Ministry of Education after the introduction of the 1944 Act, which gives education committees power of permanent exclusion. Governors, after appointment, represent no one but themselves and are accountable to one but themselves.

To whom do schools belong? Those of us who work in community education know well how difficult it is to recruit school governors in support of the use by the community of schools their rates and taxes have provided. Governors tend not to be sufficiently confident to contradict the advice they receive.

Educational institutions operating in an uncomfortable environment require support: strong support is likely to be given by a strong authority than a weak one. Educational institutions and educational institutions are interdependent. Weakening the authority will in the end weaken all the institutions.

The mess in Bradford has not been resolved by recourse to the governors. As head of one of Manchester's institutions, I share with my colleagues the frustrations of dealing with a too often unresponsive authority.

However, looking back a year, I find it difficult now to see how I could have responded more adequately to my erstwhile follow-administrators. Now there is no solution to our problems in confrontation. But there is a solution, either, in a recourse to unfairness or injustice and that is what a demand for absolute support for the action of heads and governors would lead.

Michael Sterne is acting principal of the north Manchester area of community education.

Anne Jarvis's article has been left over until next week.

Negotiate 'freedom of speech' deals, unions urged

by Richard Garner

Teachers' leaders should negotiate "freedom of speech" agreements with their local education authorities, Mr Peter Newsam, chairman of the Commission for Racial Equality, said this week.

He told the National Association of Schoolmasters/Union of Women Teachers' education conference in Rednal, Worcestershire: "So far as race is concerned, provided they do not incite racial hatred, people can say what they like, however silly or offensive some may consider it to be. Personally, I would be reluctant to move from this position."

Mr Newsam added: "Furthermore, if the law does not prevent free speech, it is important that lack of law, lawlessness, should not have the same effect. In other words, we do not want people frightened into silence by bullies, however well-intentioned."

He went on to say that in education the balance between free speech and the employment interests had in the past been handled by a "willing acceptance of convention and common-sense" but warned "both are in short supply these days".

From this I derive the simple

proposition that we now need to express these words in proper agreement between those who employ teachers and the teachers they employ. And obviously associations have a direct interest in seeing these agreements are properly devised and adhered to."

However, he argued that anyone employed in education had a duty to ensure that the system continued to operate and that "by sounding off" they would not create work difficulties for themselves or anyone else.

He said that individuals "in difficulties" should have access to "an independent person coming in from outside" to hear their case.

He said he was against any attempt to lower standards of entry to the profession as a way of bringing in more teachers from ethnic minority groups. Instead he favoured special training arrangements to enable students and others from under-represented groups to compete equally with the rest.

On school textbooks, Mr Newsam said that it was not a question of "hounding out the bad ones" but of "getting the right ones".

Jobs supremo in pledge over TVEI extension

by Mark Jackson

The Technical and Vocational Education Initiative will not be allowed to "with away" when the present pilot programme ends, Lord Young, the Employment Secretary, said this week. But he refused to commit the Government to providing resources to prolong or expand the scheme.

The Government does not accept that more resources are the key to improving schools or to implementing the curricular reforms it is demanding, he told the conference.

For more than an hour the Employment Secretary, formerly chairman of the Manpower Services Commission, faced accusations that the Government was making teachers scapegoats for its own parsimony towards education. "You are channelling Jewish resources to the MSC while you let the schools rot" he was told.

Delegates were told of scarce subject teachers leaving because of poor pay and of science departments with a pound a year per pupil for books and equipment – while TVEI projects in the next building had a thousand pounds a year a head. Lord Young suggested that the answer must be to improve the performance of the teachers.

Earlier, Lord Young had praised "the tremendous advances" and the

"degree of innovation and commitment" in many schools – singling out their imaginative teaching and curriculum development. But he reminded the conference that a substantial proportion of pupils still left school without a useful qualification.

He stressed that preparing young people for work did not mean setting education against training. At the heart of the Government's programme was the need to emphasize a practical dimension across the curriculum as a whole: that did not mean providing specifically vocational courses in the compulsory years. "All the component elements of a broad and well designed curriculum are relevant to laying foundations for the world of work," he said.

But he appeared to walk into an ambush when, answering a question, he suggested that it was a mark of elitism that the schools had produced better results in O and A levels, by concentrating on the best rather than the majority of pupils.

Lord Young was told that the Department of Education and Science was trying to get schools to return to a "general public school curriculum far narrower than the present one." He was challenged to sort out the contradiction between their policies and his.

Poundswick graffiti row: parent of accused boy hits out

by Mike Durham

A girl of 15 was among pupils who covered the walls of Poundswick High School with obscene and racist graffiti, it was claimed this week.

But she was not suspended or threatened with expulsion, it is alleged, because she cooperated with teachers holding an inquiry. In addition up to five other boys are alleged to have got away "scot free".

Meanwhile, parents on both sides of the Poundswick "obscene graffiti" dispute are preparing legal action in separate bids to end the deadlock between Manchester I.e.a. and teaching unions.

Talks aimed at reaching a compromise founded again on Monday with both sides reporting no progress. A special council meeting to discuss the issue is being held today.

The dispute Manchester I.e.a.'s decision to reinstate five pupils, who had been recommended for expulsion by the headmaster and governing body.

The so-called "dirty five" were alleged to have daubed obscene and racist slogans on a school wall, naming 10 members of staff. More than 100 yards of the school wall was covered with graffiti, including references to sodomy and oral sex, and crude drawings.

Mr Graham Davenport, whose 15-year-old stepson Enzo Poleselli is one of the five boys refused contact with teachers since mid-June, claimed the unnamed girl took part when the graffiti were written on June 17.

The girl's involvement was confirmed by Mr Nick Harris, chairman of Manchester's education policy committee.

According to Mr Davenport, a Wythenshawe milkman, his stepson was among a much larger group of teenagers who committed the offence. He has engaged barrister and instructing solicitor to defend the boy.

He said: "We have never denied that the five boys wrote some of the graffiti. What we are denying is that they wrote the most obscene slogans or even the vast majority of it."

"If I thought for one minute that Enzo had written anything obscene he would have been taken away from that school straight away. But as it is the punishment does not fit the crime."

He claimed the "dirty five" eventually suspended from school were "pressurized" by teachers into admitting to things they did not do.

The five were named by the girl, who was sent home for a few days but otherwise given immunity from punishment.

They were interviewed by the school's three deputy headteachers, who passed on their notes to the headmaster, Mr Keith Halstead. But



Campaigner Dave Wrexall and (right) the Manchester demo

Mr Davenport claimed: "They were pressurized. They were questioned from half past nine on Tuesday morning until late on Wednesday afternoon. Enzo finally admitted writing things just to get the teachers off his back. He was practically forced into writing an admission, to get some peace."

Mr Halstead worked the five confessions into a "matrix" cross-referencing what each pupil said he had written. It was this matrix which supplied the principal evidence to the board of governors and later the council's appeals subcommittee.

Opinions differ as to how many teenagers were at the scene, and whether they simply watched or actually wrote on the walls.

Mr Davenport claims that at least 11 teenagers were present – eight school pupils, including the girl, and three 17 or 18-year-olds from outside the school.

Mr Harris believes only seven school pupils and two older boys were at the scene.

According to Mr Davenport, the school's decision to suspend only five boys was "racist" and class-conscious. Three of the five are of mixed race: one is of African blood, a second of Indian descent and Enzo himself is half-Italian.

All five live in council houses, of which is said to be the biggest housing estate in Europe, in Wythenshawe. According to Mr Davenport, the two pupils who were not punished are white and from private housing.

"If all the children were punished in the same way I would have accepted it. As it is the boys have been picked on," he said.

He claimed his stepson, who should be studying for seven O-levels this year, had never been in "any degree" of trouble at school before, although he had been sent to the withdrawal unit for "being cheeky".

On the other hand, Mr Davenport feels that Poundswick has been in the grip of an over-zealous purge on discipline since Mr Halstead's arrival in 1982.

Nevertheless Mr Davenport remains determined to see Enzo return to school, despite the determination of headmaster and staff not to teach any of the "dirty five".

"If Enzo goes to a new school, he's going to be surrounded by 50-odd hostile teachers and hundreds of children. He'll be bullied and picked on." Mr Davenport is threatening to take the teaching unions to court on grounds of "intimidation" unless there is a solution in the next 10 days.

Another group of parents, many of whom have kept children away from school in support of striking and suspended teachers, is preparing to apply for an injunction against Manchester I.e.a.

Mr David Wrexall, Parents Action Committee spokesman, said Manchester was breaking the 1944 Education Act by failing to provide a full curriculum at Poundswick since the dispute. They are demanding the reinstatement of suspended teachers, a reopening of the school and the expulsion of the so-called "dirty five" pupils at the centre of the row. A court application could be made next week.

If the injunction fails, parents are believed to be making plans to occupy the school in an attempt to return it to normal.

Mr Harris told *The TES* this week that a "retail" of the five boys was not likely. There was no reliable new evidence to point to their guilt. "We know that people have been going round community centres in Wythenshawe trying to persuade kids to say they saw the five doing it. Any 'evidence' like that would be very suspect."

He added the I.e.a. knew the names of two older teenagers alleged to have taken part in the incident. They have been passed on to the town clerk who is considering legal action.

Manchester Association of Head Teachers this week wrote to councillors, accusing the I.e.a. of inconsistency and citing evidence they claim proves the five boys are guilty of the graffiti.

Mr David Hart, general secretary of the National Association of Head Teachers, has written to Sir Keith Joseph, asking for a meeting to discuss discipline and the powers of governing bodies.

Mr Hart said he wanted to "thresh out" some of the issues raised in the Government's proposed new Education Act, in the light of the Poundswick and Ray Honeyford disputes.

The Advisory Centre for Education (ACE), the education pressure group, has supported the stance taken by Manchester I.e.a. It condemns the teachers' refusal to accept the I.e.a.'s decision as "unconstructive".

The National Association of Schoolmasters/Union of Women Teachers has launched a national appeal to help pay the wages of its 18 members at Poundswick who are either on strike or have been suspended because of the row. The union says it is costing £6,500 a week to make up the wages of its members.

NEWS

Geldof asked for cash

A leading international educationist has written to Bob Geldof asking for "a small part" of Live Aid funds to be diverted from famine relief to British schools for development education. Bob Geldof has not replied.

Mr Robert Creighton, honorary secretary of the Standing Conference on Education for International Understanding, said that organizations trying to promote international understanding in schools were starved of cash.



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Appraisal schemes offer

by Richard Garner

A teachers' union is briefing its members this weekend over how they should negotiate appraisal schemes with their employers, in anticipation of government legislation enabling local education authorities to appraise their teaching force.

The Assistant Masters and Mistresses Association is holding a weekend conference with representatives of industry and the police – where staff appraisal schemes have already been introduced – to prepare their branches for local negotiations with I.e.a.s in the months ahead.

Leaders of the union are convinced that Sir Keith Joseph will go ahead with his plans for legislation to compel I.e.a.s to introduce appraisal schemes

and are expecting the plans to figure in the Queen's speech next week.

Mr Peter Smith, deputy general secretary of AMMA, said the idea of the conference was to help its branch officials to become better prepared for the ensuing negotiations.

A briefing document for the conference gives examples of a wide range of appraisal schemes – both adopted by individual schools and by industry at large. Many of them emphasized locally agreed appraisal schemes, rather than a nationally agreed model.

One scheme cited comes from Bicester school, which has a scheme for staff appraisal since 1978. The paper on it says: "Senior members of staff expect to be accountable to junior colleagues

as well as to the head for the exercise of their responsibilities."

Speakers at the conference – to be held at the union's London headquarters in Northumberland Street just off Trafalgar Square – include Mr McKenzie, a former superintendent with the Metropolitan Police, and Ron Shepherd, education, training and personnel services manager with the Ford motor company.

In addition, Mr David Williams, assistant secretary at the Department of Education and Science, and Tom Cornthwaite, deputy education officer with Suffolk, will speak.

The conference takes tomorrow.

Urban imbalance in young set to continue Inner city under-fives boom

by Biddy Passmore

The number of under-fives is rising in England's inner cities than in the population as a whole, according to figures published this week.

In the inner cores of London, Birmingham, Manchester, Newcastle, Leeds, Sheffield and Bristol, numbers of very young children have increased by between 4.6 per cent and 21 per cent since 1981, compared with 4.2 per cent nationally. Only in Liverpool has the total of under-fives stayed virtually the same.

When the overall decline in population in these areas is taken into account, the relative rates of increase are up to six times the national rate, the figures show.

and much greater than in the "hi-tech" corridors along the M3 and M4 motorways.

This means that the imbalance in inner city populations, which already have disproportionately large numbers of teenagers and young adults, is set to continue until the end of the century.

In inner Birmingham, for instance, where young people aged 15 to 19 are already 13 per cent more numerous than in England as a whole, nearly 10 per cent of the population was under five last year – compared with a national figure of just over 6 per cent.

These figures, which have substantial implications for housing, education and the youth service (see page 15) as well as for inner city policy generally, have been produced by the market research firm CACI. The information has been compiled for firms using data from the Office of Population Censuses and Surveys (OPCS) and local authorities.

While the number of school-age children has declined by around 9 per cent since 1981, in new development areas such as Bracknell (Berkshire) and Peterborough (Cambridgeshire) the numbers of children aged 10-15 in certain wards has risen by more than 50 per cent.

CACI, Market Analysis, 50/62 High Holborn, London WC1V 6DX.

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NEWS

Nuclear power included in peace studies guide

by Susannah Kirkman

Newcastle City Council has expanded its controversial peace studies guidelines for teachers to include a section on nuclear power.

The topics covered include nuclear power stations, the problems of nuclear waste disposal, fast-breeder reactors, nuclear proliferation, radiation and the use of radio-isotopes.

The project is aimed at pupils aged 14 and over and the guidelines include a warning to teachers to be sensitive in their approach, as children "may experience a strong emotional and psychological reaction" to some of the subject matter.

"When matters are controversial, it is important to present both sides of the argument," suggests the guide. Pupils are to be encouraged to sift through evidence before forming judgements and coming to conclusions, it says.

The guide to nuclear power recommends source material from the UK Atomic Energy Authority, the Central Electricity Generating Board and British Nuclear Fuels, as well as from Friends of the Earth and ECOROPA.

Choosing unbiased material is difficult, it admits. With a few exceptions, the information on nuclear power stations, for instance, is totally polarized, the guide says.

It criticizes a Friends of the Earth booklet on the environmental risks of nuclear power for presenting an "emotional case", rather than a technical viewpoint, but notes that nuclear meltdown is a topic omitted in all the CEEGB and UKAEA literature available.

The working party responsible for the guide is anxious to refute allegations of bias. The group included a representative from the Tyneside Anti-Nuclear Campaign, according to Ms Jill Brooker, a working party member.

A report by Dr John Marks from the National Council for Educational Standards last year accused the Newcastle nuclear weapons project of promoting a "one-sided" view of peace in classrooms.

The original Newcastle material on nuclear weapons has now been revised

and is included with the seven topics on nuclear power.

Nuclear Issues in Education, price £4.95. Available from Pendower Hall Teachers' Centre, West Road, Newcastle upon Tyne, NE15 6PP.

● The Quakers are launching a public appeal to expand research work at Bradford University's School of Peace Studies.

The money will provide research studentships so the department can start new research into disarmament and mediation. According to Professor James O'Connell, head of the school, the department is hoping to begin projects on East-West arms negotiations, the position of West Germany in NATO, Soviet anti-ballistic missiles and "Star Wars" - the American strategic defence initiative.

The Quakers are hoping to raise £250,000, or one-fifth of the cost of a new Toronto, as Professor O'Connell put it. £40,000 has been donated so far.

The Peace Studies Department was founded in 1972 with £80,000 from the Quaker Peace Studies Trust.

County misled student

by Diane Spencer

The local ombudsman has found Berkshire County Council guilty of maladministration causing injustice to a student who wanted to attend a central London college for a course in the distributive trades.

A mother complained she received conflicting advice from council officers on the availability of comparative courses within the county and they were not told of a tightening-up of policy on travel costs.

Her son was awarded a place at a London college in January 1984 to take a BTEC General Diploma course in distribution, and a provisional place on the BTEC national diploma course. The council agreed to pay the out-county charge for the course but refused to meet his travel costs.

The ombudsman found that officers were guilty of providing bewildering and conflicting advice and on occasion failed to distinguish between the general and the individual diploma.

The mother had no reason to believe that the council would not pay travel costs for her son as they had done so in the case of a neighbour.

Berkshire had tightened up its grants policy because of financial constraints. But a booklet published in February 1984 giving information about grants to schools, colleges and careers officers did not lead the mother to believe that travel grants were readily available. Her son has now finished his course and is taking a national diploma on a day-release basis while working on a junior scheme for a department store.

The council now has to consider its report and tell the ombudsman what action it proposes to take.

Rolle recruits 5 disabled

At least five students among the 1989 intake to Rolle College, Exmouth, will come from a Cheshire Home.

Building starts next year on a site within the college grounds which will see the first Cheshire Home directly linked to a college of higher education.

Dr Michael Preston, college principal,

said the home would eventually accommodate 18 disabled people, at least five being students at the college.

Rolle College was founded in 1949 as an emergency training college for teachers. It now has 600 full-time students on a range of courses together with 250 full-time equivalent students on in-service courses.

Better than average exam results

Inspectors have found secondary school exam results in the London borough of Redbridge to be slightly higher than the national average. More than 9 per cent of the school population attends grammar schools - a proportion that has increased as school rolls have fallen.

A report on education provision notes that the proportion of school-leavers with 5 or more O levels (grades A to C) or CSE grade one is 25.6 per cent compared with a national average of 22.7 per cent.

But while inspectors found high quality work in schools, the report says that about one tenth of the lessons seen were not up to standard, primarily because of poor behaviour from children.

Some lessons provided little opportunity for pupils to take an active part. The teaching which resulted in unsatisfactory standards often appeared to be poorly planned.

Inspectors conclude that Redbridge provides a sound and satisfactory

education service. The work done in the borough's primary schools is singled out for praise. "Work was mostly pleasing: most of the pupils were achieving commendable standards and behaviour was generally orderly and friendly", says the report.

Poor behaviour in some secondary schools may be linked to a general tendency in those schools for the work to be rather narrow and unstimulating. The report says able pupils do well in both grammar and comprehensive schools.

The difference between grammar and comprehensive schools is in curriculum, with the grammar schools laying greater stress on science and languages, and rather less on crafts, mathematics and English.

The report suggests the authority does need to give attention to two areas: the accommodation and resources for under-fives in ordinary schools and the in-service training of teachers.

Special praise

The Rowan School, Sheffield, a 61-pupil special school for BSN(M) children and pupils with communication learning difficulties, is praised by inspectors for its involvement of parents in the life of the school. Relationships between staff and parents are close and mutually supportive.

The Inspectorate also praises the quality of teaching, and good atmosphere in the school. The balance of the curriculum is generally successful, but they warn that teaching appropriate to children's age and ability should more carefully be taken into account.

HMI reports

HMI reports are available free of charge from the Department of Education and Science, Publications Dispatch Centre, Honeypot Lane, Stanmore, Middlesex HA7 1AZ. Also available from I.C.S.A.

Urgent repairs needed

The Notre Dame Catholic High School, Blackburn is in urgent need of repair, say inspectors. Children moving classes have to walk corridors with loose or badly fitting floorboards.

Inspectors also found peeling paint and crumbling plaster. The school dining room was below ground and "barely acceptable in terms of size or position", says the report. The gymnasium was "out of action". A basement classroom, which housed a kitchen, was out of action because it ran with water.

The state of the school had resulted from a lack of investment and the postponement of maintenance work. The report says major funding will be required to restore the school, which is in a "very poor state", and at worst "seriously affects the quality and work

and achievement of pupils." The school is a former direct grant girls' grammar school, but has been a mixed comprehensive for 11 to 16-year-olds since 1974. An exception to the poor condition of the building is the chapel, which is well used and attractive.

The school was adequately provided with books, but had little audio-visual or other equipment. Inspectors noted a lack of electric typewriters and no access to a word processor.

Teachers are commended by inspectors for hard work, but the report notes variations in pupils' achievements. Lessons in sciences tended to be prescriptive, with little scope for individual interpretation of experiences.

Discretionary entry is commended

More than half the students taking the Business and Technical Education Council course at the South West London College do not have the specified entry qualifications.

They were admitted on the principal's discretion and exam results show that, despite such a high proportion of students without the normal entry requirements, the overall pass rates were reasonably good.

The college, which was inspected as part of a national survey of part-time advanced further education, is commended for drawing a substantial number of women students and students from ethnic minorities. On some courses women were 40 or 50 per cent of the students.

Most of the students lived within 10 miles of the college. About 10 per cent of the students on the Higher National Certificate business studies course were unemployed.

The inspectors found the work in the college traditional in approach, but of good quality. Parts of the accommodation - the college operates on five sites in south London - were reported to be poor. Students had problems using the libraries in the evenings. The staff were well qualified, but many did not have recent industrial or commercial experience. The report suggests the college should develop further its use of computers and computer equipment should be brought more into the teaching process.

Standards praised

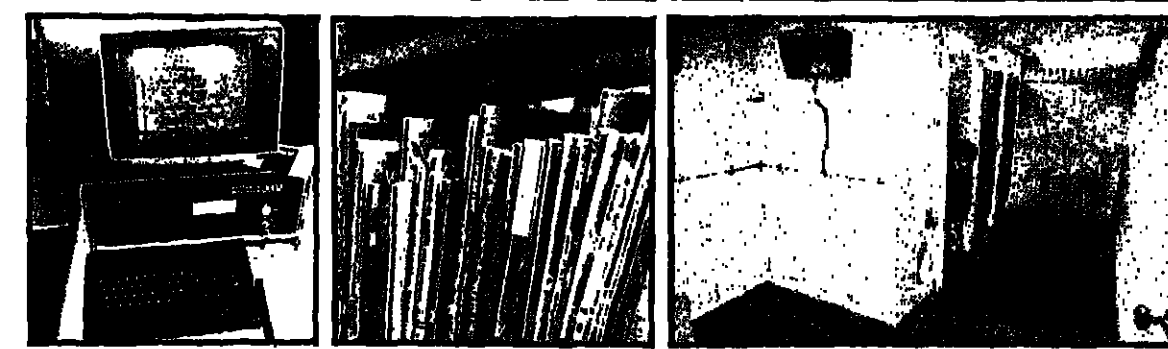
Lowton High School, Warrington, praised by inspectors for its high standards of work and well-balanced curriculum.

The school was opened in 1977 as a Wigan education authority school. It is a 16 comprehensive and comprehensive school. At the time of inspection, in November, there were 1,027 students on roll.

Inspectors said the school was well led and effectively managed. The report showed a "high degree of commitment to the academic and personal development of the pupils".

Examination policy was sound and the results achieved noteworthy. Inspectors thought the present balance between teacher direction and pupil initiative in learning could be improved in some subjects. They noted some of the most able pupils were underchallenged at times.

NEWS



Essential items that PTAs can supply: microcomputers, textbooks and paint for urgent redecoration.

Parental contributions widening the gap

Survey shows poorer children miss out as schools increasingly turn to PTAs for funds. Susannah Kirkman reports

rated for more than 20 years. In one, the toilets were in such a bad condition that a teacher complained: "We need to get into the toilets dry-footed." PTAs at several schools have paid for indoor toilets, paint, scaffolding and gardening equipment for school caretakers.

Almost a quarter of the funds raised by parents of primary schoolchildren is going on furniture, redecoration and maintenance of school buildings. For secondary school PTAs, the figure is 15 per cent.

Large classes are another problem. Despite Sir Keith Joseph's boast that the pupil-teacher ratio is lower than

over before, some primary schools have classes of mixed age pupils with more than 40 children and one class of 47 has been reported.

The Government guideline for mixed age classes is 26 children, but 72 per cent of primary schools now have classes larger than this.

And there has been a "significant increase" in secondary school class sizes, particularly for less able children. Forty three per cent of secondary schools complain of larger classes. In half of secondary schools, laboratories and other work areas are overcrowded.

The curriculum is suffering too,

music and second languages have been lost in primary schools, while many secondary schools no longer have Latin, Greek, Spanish or German. Even Craft, Design and Technology, one of Sir Keith's favourite "relevant" subjects, had disappeared in some schools.

Textbooks are in short supply. In half of primary schools and 82 per cent of secondary schools, pupils are forced to share textbooks. The report says it is "highly disturbing" to find that pupils cannot any longer take textbooks home or study at their own pace in class.

There is a "woeful shortage" of

microcomputers. 35 per cent of the money parents raise now goes on microcomputers, as they realise that children are not getting the vital "hands-on" experience they need.

Mrs Naybour said that the Government is expecting more and more from education - without giving schools the resources they need to carry through the reforms. The integration of children with special educational needs, the innovative technical and vocational initiatives and the new curriculum and exams are all placing extra demands on teachers and schools.

Teachers are bearing the brunt of the cuts, the survey suggests. In 81 per cent of secondary schools, teacher "contact time" has increased. This means they have less time to prepare lessons and mark books and less time to keep abreast of the latest curricular developments.

One in three teachers said they did not have enough time to talk to parents. The report suggests that this could be a direct result of teachers' low pay. It says: "As they feel themselves undervalued by society, so they are less inclined to give up time outside the normal working day for parental contact."

The confederation is asking for more money for schools and urges parents to write to their MPs with examples of underfunding in their children's schools.

Mr Christopher Patton, Minister of State for Education and Science, said that the survey's findings on class sizes were not borne out by national figures, which showed that the proportion of classes containing more than 30 pupils had been halved.

Money was not being effectively spent in the education service because parent-teacher associations blocked the closure of uneconomic schools.

The National Union of Teachers called the NCPA report "a damning indictment of the Government's complete disregard for the education of Britain's children".

Threat on urgent repairs

Governors at an 80-year-old Manchester school have threatened to bring in the District Auditor if urgent repairs are not finished by the end of term.

Staff and pupils at St Mark's School, Chesham, have put up with leaking roofs, dangerous electrical systems, cramped classrooms and poor heating for long enough, say the governors.

The governors have complained about:

● Holes in the roof which allow rain into classrooms, the hall and the head's study;

● Too few toilets - there are only seven for 144 girls;

● Rotten window frames, which let in draughts and keep classrooms freezing; and

● Failure to provide a fire alarm system.

According to the headteacher, a new school was promised 10 years ago. Plans have been drawn up, but the council has said that there is no money to build one.

Governors too soft on race row, says council

by Diane Spencer

The governors of Waltham Forest College have been criticized by local councillors for giving "a wholly inadequate response" in the row over the principal's controversial letter to *The Times*.

In a further education subcommittee meeting on Monday night, councillors also called for a report to be prepared by the chief education officer and presented to a panel of the education committee.

Disciplinary proceedings against Mr Jack Fuller, the principal, would then be considered, if the panel thought it appropriate.

Mr Fuller provoked demonstrations and picketing by students when he wrote on October 11 that young West Indians were largely to blame for a spate of thefts, muggings and vandalism at the college.

The college's governors, who have forbidden Mr Fuller to speak to the press, issued a statement last week after a three-hour meeting. They de-

scribed the letter as "untimely" and said they were seeking an undertaking from Mr Fuller that he would not publish, in his official capacity, further comments on sensitive and controversial issues without first consulting them.

Members of the National Association of Teachers in Further and Higher Education at the college voted on Monday to call for the principal to retract the letter in full. They also want the education authority to "invoke the normal disciplinary proceedings" against Mr Fuller.

Mr George Arkless, spokesman for the college's NATFHE branch, denied reports that at least 30 members had resigned over the issue. He had heard rumours that only one person had claimed to have resigned.

At Monday's meeting, 117 out of the 180 union members had attended and the voting was overwhelmingly in favour of the resolutions.

Mr Dave Triessman, negotiations secretary of NATFHE, said he had found no evidence of "mass defection". He added: "We strongly support what the branch has done. As secretary of the national executive's anti-racism and race relations panel, I thought Mr Fuller's letter was deeply offensive and any prudent person would have anticipated the reaction that took place."

The subcommittee's decision will now go to the full education committee for ratification in two weeks' time.

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NEWS

This week *The TES* publishes the GCSE draft grade criteria on biology, physics and chemistry

THE SCIENCES

The separate science working parties for chemistry, biology and physics have worked quite closely together. They have produced three domains which are common to all the sciences. They are:

A. Knowledge with understanding

BIOLOGY

Grading system

Overall grade	Total points gained	Hurdles	Examples of possible domain scores
G	2	Must achieve Level 1 in any 2 domains	110
F	3/4	Must achieve at least Level 1 in all domains	211
E	5/6	As for F	221
D	6/7	Must achieve at least Level 2 in 2 domains	322
C	8/9	Must achieve Level 3 in any 2 domains	432

Use of terms

● **Domains:** subject areas. Each subject has been divided into at least three domains.

● **Levels 1 to 4:** Level 1 corresponds to grades F/G, Level 2 corresponds to grade E, Level 3 corresponds to grade C/D, Level 4 corresponds to grades A/B.

● **The draft grade criteria define what candidates must be able to do to achieve each level or grade in every domain.**

● **The criteria for French describe the levels of achievement as "areas of competence," and there are seven, not four.**

● **An aggregation:** adding up the points scored in each domain to produce a final grade.

● **In most subjects, successful completion of one level or grade in a domain entitles the candidate to one point, which goes towards their total score.**

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Recall and understanding of knowledge in relation to:
1 language: terms, symbols, quantities and units;
2 facts, phenomena, concepts, principles, patterns, models and theories;
3 the techniques, procedures and principles of safe laboratory work.

B. Handling information and solving problems
The ability - using oral, written, symbolic, graphical and numerical

B	10	433
A	11/12	444
		443

Examples

A1 The language, terms, symbols, quantities and units of biology

The candidate has demonstrated the ability to:
Level 1. Recall terminology based upon concrete examples which might be expected to lie within his/her first-hand experience.

Level 3. Recall and use terminology which is based upon concrete examples to which access would be gained by consideration of second-hand evidence.

Level 4. Recall and use terminology, which is based upon general principles or abstract concepts.

A2 The facts, concepts, principles, patterns, models and theories of biology

The candidate has demonstrated the ability to:

Level 1. State, describe or give examples of concrete phenomena, which might be expected to lie within his/her everyday and first-hand experience.

Level 3. Recall and explain concrete examples, to which access would be gained by second-hand evidence.

Level 4. Use cause and effect to explain general principles or abstract concepts.

3 The techniques, procedures and principles of safe laboratory work

The candidate has demonstrated the ability to:

Level 1. Recall information relating to experimental work, based upon examples which might be expected to lie within his/her first-hand experience.

Level 3. Recall information relating to experimental techniques and procedures, based upon concrete examples to which access would be gained by consideration of second-hand evidence.

Level 4. Demonstrate knowledge of and explain general principles of experimental procedures.

Handling information and solving problems

B1 Locate, select and organize information from a variety of sources

(Information to include verbal, pictorial, diagrammatic material. Sources to include written, oral and computerized data bases, as appropriate.)

material to:
4 locate, select, organize and present information from a variety of sources;
5 translate information from one form to another;
6 use information to identify patterns, report trends and draw inferences;
7 present reasoned explanations for phenomena, patterns and relationships;
8 propose hypotheses and make predictions;

9 solve problems, including some of a quantitative nature.

C. Experimental skills and investigations

The ability in relation to practical enquiries to:
10 identify problems and plan investigations;
11 organize and conduct investigations;

12 interpret, evaluate and report upon observations and experimental data;
13 evaluate methods and suggest improvements;
14 follow instructions;
15 select and use techniques, apparatus and materials;
16 make and record observations, measurements and estimates.



Pictures: Richard and Sally Greenhill

constraints of the Level 1 criteria and domains.
Level 3. Solve problems within the constraints of the Level 3 criteria and domains.
Level 4. Solve problems within the constraints of the Level 4 criteria and domains.

Experimental skills and investigations

C1 Select and use techniques, apparatus and materials safely and correctly in accordance with instructions.

The candidate has demonstrated the ability to:

Level 1. Complete safely and effectively a range of operations using standard laboratory equipment and carry out procedures for which full instructions and a demonstration is provided.

Level 3. Carry out standard procedures effectively and safely without instruction. Carry out novel procedures guided by written or diagrammatic instructions.

Level 4. Devise and carry out procedures to meet specified goals.

Operations are the activities involved in using single items of equipment.

Procedures are sequences of operations involving several items of equipment.

C2 Make and record observations

The candidate has demonstrated the ability to:

Level 1. Make and record observations in response to specific cues or instructions.

Level 3. Make and record observations, in response to general cues or instructions.

Level 4. Make and record observations, in response to abstract statements or hypotheses.

C3 Make and record measurements and estimates

The candidate has demonstrated the ability to:

Level 1. Make appropriate measurements which involve taking direct readings from positive linear scales. Make appropriate estimates.

Level 3. Make appropriate measurements which involve (i) direct readings from negative and non-linear scales; single-step arithmetic calculations. Make appropriate estimates.

Level 4. Make measurements which involve (i) multiple calculations; (ii) interpolation of values from graphs which do not involve scale interpolation.

Level 3. Is able to search for, extract, collate, translate and present information from given sources, and recognize inconsistent data.

Is able to use given information in order to:

1 tackle problems in familiar contexts, involving more than one step but a limited range of variables; or a one-step problem in an unfamiliar context;

2 detect patterns, trends, similarities and differences;

3 test a given hypothesis; and

4 support or criticize an opinion or decision.

In a physical context is able to substitute numbers into given formulas and use the four rules of number with positive and negative integers, simple fractions and decimals. This may include transposition of formulas. Is able to extract values from graphs, which may involve interpolation of scales and extrapolation.

Level 4. Is able to search for, extract, collate, translate and present information from a choice of sources. Is able to recognize and take account of unreliable, inconsistent and redundant data.

Is able to use information in order to:

1 tackle problems, in an unfamiliar

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range". This could be done in terms of defining appropriate cut-off marks on a set of examinations. It would be necessary to ensure that a student could achieve a substantial measure of success in attaining the minimum level for which the assessment is designed.

Alternatively, this requirement could be met by a system of unit accreditation of graded assessments, where "limited" and "wide" would be defined in more detailed clarification of the syllabus content and its related assessment objectives for each level.

B Handling information and solving problems

Rationale for the draft criteria

The level statements describing performance in this domain are founded on the assumption that the skills involved may be differentiated by the context and complexity of the problem set. Context may be seen to extend from familiar/routine situations to those which are unfamiliar/novel situations. Complexity may be seen as reflecting the number of steps or concepts involved in solving a problem. Many problems in physics require some competence in mathematical techniques and the application of mathematical skills is an important aspect of complexity. All the level statements involve aspects of information handling as an enabling skill to aid problem-solving. The higher-level statements require a student to demonstrate competence in a greater range of skills, some of which are intellectually more demanding.

Performance level indicators

The principal "performance level indicators" used in the criteria statements are as follows:

1 Handling information:
a number and type of sources of information used;

b extent of guidance provided.

2 Solving problems:
a complexity of problem:
- number of steps required;
- number of variable used;

b complexity of mathematical techniques required.

The draft performance level criteria. The proposed level criteria are:

Level 1. Is able to search for, extract, compare and contrast information from a given source and present this in its original form.

Is able to use given information to:

1 identify similarities and differences; and

2 recognize inconsistent data.

In a physical context, is able to make direct substitution of positive whole numbers into given formulas and operate with the four rules of number on positive integers <100. Is able to plot points on graphs with pre-drawn scales and extract information from them when no interpolation or extrapolation is required.

Level 2. Is able to search for, extract, translate and present information from a given source.

Is able to use given information to:

1 tackle a one-step problem involving familiar contexts and concepts;

2 identify patterns, trends, similarities and differences;

3 support a given statement; and

4 recognize inconsistent data.

In a physical context is able to make direct substitution of numbers into given formulas and use the four rules of number with integers and simple decimals. Is able to extract values from graphs which do not involve scale interpolation.

Level 3. Is able to search for, extract, collate, translate and present information from given sources, and recognize inconsistent data.

Is able to use given information in order to:

1 tackle problems in familiar contexts, involving more than one step but a limited range of variables; or a one-step problem in an unfamiliar context;

2 detect patterns, trends, similarities and differences;

3 test a given hypothesis; and

4 support or criticize an opinion or decision.

In a physical context is able to substitute numbers into given formulas and use the four rules of number with positive and negative integers, simple fractions and decimals. This may include transposition of formulas. Is able to extract values from graphs, which may involve interpolation of scales and extrapolation.

Level 4. Is able to search for, extract, collate, translate and present information from a choice of sources. Is able to recognize and take account of unreliable, inconsistent and redundant data.

Is able to use information in order to:

1 tackle problems, in an unfamiliar

context, involving multiple steps and variables;
1 detect patterns, trends, similarities and differences;
3 make predictions and generate hypotheses;
4 Make a critical appraisal of an opinion or decision.

In a physical context is able to substitute positive and negative, fractional and decimal numbers into given formulas, use the four rules of number and operate on numbers including those in standard form. This may involve transposition of formulas. Is able to extract values from graphs which may involve interpolation of scales and extrapolation.

Examples

The following are examples of the types of activities that might be used:

Level 1. Examples of activities:
1 locate a table of densities in a data book;

2 given such a table, locate the value for copper;

3 compare, contrast values for copper, iron, water;

4 use a computer database to identify which car has the greatest acceleration from various items of information including mass, maximum power, fuel consumption at various speeds, maximum speed, drag coefficient;

5 calculate the pd when the current is 3 amperes and the resistance is 20 ohms where $V = IR$ is given; and

6 plot points on graphs and extract information from graphs using pre-drawn scales and requiring no interpolation or extrapolation.

Level 2. Examples of activities:
1 translate from a table of data to a graph with pre-drawn axes, labels and scales;

2 from a pie chart, suitably labelled, give percentage of electricity generated by nuclear power stations;

3 given a speed/time graph, write a description of the journey;

4 from a given list of formulas, identify the one needed to solve a given problem;

5 calculate the power dissipated when a current of 1.5 amperes flows through a resistor having a pd of 240 volts across it, given that $P = VI$;

6 identify the fact that doubling volume of substance also doubles its mass;

7 complete a question sheet based on factual information from a film.

Level 3. Examples of activities:
1 translate from a table of data to a graph;

2 execute a calculation on power which might involve such steps as mass - force - work done - power;

3 given information in a data sheet, carry out a comparison of relative advantages and disadvantages;

4 detect direct and indirect proportionality and no obvious relationship; and

5 use a computer spreadsheet or database to check a given relationship, detect patterns or trends.

Level 4. Examples of activities:
1 from a collection of specification sheets for appliances eg a microwave cooker, select one with appropriate dimensions, cost, power rating, safety devices;

2 from a film on safety, extract information to produce an advice sheet for people working in the building industry;

3 use of computer spreadsheets and databases to find relationships and trends;

4 using given graphs to draw inferences, in unfamiliar contexts.

C Experimental skills and investigations

Rationale for the draft criteria

In the draft criteria statements the term "investigation" is used to describe an experimental activity which is more than the practice of practical skills and techniques but which will nevertheless include them as an essential part of an integrated activity.

The investigations, which are expected to embrace a wide range of experimental activities including appropriate skills both practical and observational, should be aimed at investigating a physical relationship or property or at solving a problem in a practical context.

The term "investigation" has come to mean different things to people with different experience and expectations of experimental activities in the science laboratory. In using this term, we do not intend to imply or impose any particular interpretation except that we believe that an atomistic approach, in which an assessment of individual skills and techniques is recorded on a

check list for each student, would be inappropriate. Moreover, it is hoped that whatever form of assessment is developed, it will encourage the practice of performing whole investigations. The ability to carry out purposeful scientific work is more than the sum of the component parts and processes. It is therefore intended that any assessment of specific practical skills should always be done in the context of genuine scientific activity.

In order to clarify the aspects of the experimental activity which is to be assessed in this domain and to assist in the construction of the criteria statements, the following have been described as involving five related processes (derived from the APU Problem-Solving Model: (7)):

1 planning and preparation for an experimental activity or investigation;

2 performing and investigating;

3 recording observations and data activities and outcomes;

4 manipulating data and analysing results; and

5 evaluating and modifying procedure.

The level criteria have been derived from a consideration of how a student attaining a particular level might be expected to perform at each of these processes. In addition, it is recognized that the degree of prompting or assistance, whether direct or indirect through the formulation of the "question" is a valuable level indicator. Essentially there seem to be two level indicators - the "quality" of the approach to the investigation and the degree of prompting.

An example of an investigation

To investigate why washing may freeze when hung out to dry on a day when the air temperature is +2°C.

Level 1. The student uses a thermometer to get air temperature. He wets a cloth and takes the temperature of the wet cloth. With prompting, he creates a breeze and tries to obtain temperature readings. He presents a report of his actions.

Level 2. The student, with prompting, sets up a model washing line and hangs a line outside or uses a fan to create a breeze. He/she compares readings of temperature of a dry cloth and a wet cloth and presents a report of actions undertaken with a summary of results along with obvious conclusions.

Level 3. The student is able to undertake sequence shown at Level 2 without prompting and may suggest comparing results obtained with different materials or may want to create different conditions/strength of "breeze".

Level 4. The student selects and uses samples of different materials and devises suitable means of creating a breeze. The sequence of activities is recorded accurately and the summary suggests the degree of success of experiments and possible modifications.

Grading system

The aggregation model proposed is:

(a) Each domain is given an equal weighting.

(b) The levels in each domain - that is, 1, 2, 3, 4, are added together to give a combination score level.

(c) The combined level score is then converted into a grade using the table below. However, the award of certain

GCSE grades would be conditional on the candidate having attained a minimum level of performance across the domains; our proposals for these are given in the table below.

GCSE grade	Minimum combined level score
G	3
F	3
E	5
D	6
C	8
B	10
A	11

It was considered that for the F grade there should not be a requirement for a level 1 to be obtained in each of the three domains since this would pose a relatively high hurdle for such students. At grade E and higher, however, it was felt there should be a minimum successful performance at level 1 in all domains. So, for example, in an extreme case a candidate attaining a combined level score of 6 composed of levels 3, 3 and 0 in the 3 domains, would only be awarded a

grade F rather than a D because of failure to achieve any reported level of success in one domain. It was considered there would be merit in awarding a grade if a student obtained at least the minimum level of success in any one domain, hence the G grade being given for a minimum combined level score of 1.

Obviously in considering the grade to be awarded to any student there will be borderline cases meriting special consideration.

Arguments for weightings being other than equal for each domain were considered. However, it was felt that there was merit in proposing the simplest model. The working party is aware that there are apparent discrepancies between the model proposed and that specified in the national criteria with, in particular, an increase in emphasis on process and experimental skills. However, we feel that the two are not irreconcilable since the domains used have "cut up" the physics case" in a different way from that specified by the assessment objectives in the national criteria and thus a direct comparison of weighting percentages is not entirely appropriate.



CHEMISTRY

Domains

The domains for chemistry are the same as those for physics and biology, apart from Domain C, experimental skills and investigations, which has six sub-domains or descriptions instead of seven.

Domain C. Experimental skills and investigations

The ability in relation to laboratory or field work to:

10 identify problems and plan investigations;

11 organize and conduct investigations;

12 interpret, evaluate and report upon observations and experimental data;

13 evaluate methods and suggest improvements; and in the course of such work to:

14 follow instructions, select and use techniques, apparatus and materials;

15 make and record observations, measurements and estimates.

Grading system

The working group explored various ways of producing scores for each domain and for combining those to produce an overall grade. In doing so it considered such matters as whether some of the criteria are intrinsically more difficult to meet than others, whether the notion of mastery should be made more, or less, explicit, and whether hurdles should be incorporated in aggregating scores. One factor which strongly influenced conclusions was that the component to be assessed

Continued on page 14

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by teachers must not subject teachers or pupils to unnecessary burdens.

Domain A: Knowledge with understanding

The assessment will refer to two types of content:

Content with identified levels.

Content which is not so classified.

(i) Each Examining Group would choose content areas for use in type (i) assessment. For each of these areas a candidate's performance would be assessed as level U, F, C or A for which, it is suggested, scores of 0, 1, 2 and 3 respectively should be awarded. Thus if a group chooses six content areas, candidates' scores will be in the range 0 to 18.

(ii) Performance in the rest of the content of this domain would be represented initially by a raw score resulting from the marking of questions or part questions which are distinct from those used in (i) above. The required differentiated papers will provide opportunities for candidates achieving level F to demonstrate a significant number of correct responses.

The problem remains as to how the assessments in (i) and (ii) should be weighted and combined. Equal weighting is the simplest procedure and an alternative should probably only be adopted if there is a compelling reason.

A domain score would be derived from a total mark reflecting in part,

defined levels of performance. The working party feels this approach offers a practicable way of introducing an element of criterion-referencing without imposing an unacceptable level of prescription. A possible model would run as follows:

TABLE 1

Domain score	a	b	c	d	e	f	g
Minimum mark required (maximum of 36)	30	26	22	18	14	10	6

Two further points should be made. The above proposals would need to be monitored in practice and the correlations between scores in (i) and (ii) would need to be examined. It is also assumed that questions to be used in the unclassified section (ii) would be pre-tested and given facility indices.

Domain B: Handling information and solving problems

Six descriptors for this domain are proposed. Each is associated with a criterion statement, to be scored 0, 1, 2 or 3 points as a result of assessments made to signify mastery at the corresponding performance level from U through F and C to A.

One of the descriptors, "Select and present information from a variety of sources" might be assessed by the teacher. It can be argued that teachers are in the best position to bring before candidates the full diversity of source materials required if reliable assess-

ments are to be made at all levels of attainment. On three occasions, the first being perhaps in the third term of the course, the teacher might draw upon the criteria to judge which performance level a candidate has attained and record this 0, 1, 2 or 3 on a record card supplied by the examining group. After moderation, these scores, scaled as necessary, would be added to the external assessments to arrive at an overall performance level on the domain.

For each of the remaining five descriptors, examining groups would need to devise questions capable of producing the range of performance envisaged, and award scores from 0 to 3. Given the six descriptors for Domain B, therefore, the total scores would range from 0-18. Candidates' scores would then be obtained for the domain as follows:

TABLE 2

Domain Score	a	b	c	d	e	f	g
Minimum mark required (maximum of 18)	15	13	11	9	7	5	3

Domain C: Experimental skills and investigations

It is proposed that tasks featuring each of the six descriptors in Domain C might be teacher-assessed on three occasions with perhaps two of the three assessments for each taking place in the final year of the course.

It is suggested that candidates' performances in the areas covered by descriptors 10 to 13 should be assessed against the criteria on three occasions. As before, scores of 0, 1, 2 and 3 would be awarded for performances at levels U, F, C and A respectively. The scores for this sub-total of 12 assessments (four descriptors, three occasions each) would be summed up to give a mark out of 36.

Similarly, the areas covered by descriptors 14 and 15 would be assessed on three occasions on the same scale from 0 to 3. The scores for this sub-total of three assessments (two descriptors, three occasions each) would be summed to give a mark out of 18. The second mark would be doubled to a mark out of 36, effectively giving equal mark allocations to the "investigations" and "experimental skills" sub-domains, and the two sub-totals would be summed to give an overall mark for the domain. Domain scores would then be arrived at as follows:

TABLE 3

Domain score	a	b	c	d	e	f	g
Minimum mark required (maximum of 72)	60	52	44	36	28	20	12

The following would help to ensure that teachers are presented with an assessment task that is manageable and supportive to their teaching:

- (i) Assessment should, wherever possible, be built into normal course activities.
- (ii) A limited number of criteria should be considered on any one occasion.
- (iii) Assessment should be spread over the final three or four terms of the course.

The combination of domain scores to produce an overall grade

Each domain score will have been based on candidates achieving success at various levels on a variety of tasks and questions. The last stage of aggregation should not reintroduce the detailed evidence used in arriving at domain scores. It should be a mechanical process in which the main point of principle is that each of the three domains should receive equal weighting. A suggested method is outlined in the following paragraphs. Scores from a to g on the three domains are converted to numbers from 7 to 1 respectively and these numbers are summed for each candidate. Thus, a candidate scoring c on each domain will score a total of 15 (3 + 3 + 3) and a candidate with domain scores a, d and f receives a total of 13 (7 + 4 + 2).

Overall grades would be derived from the total scores as follows, for example:

TABLE 4

Overall grade	a	b	c	d	e	f	g
Minimum total score required	20	17	14	11	8	5	3

One further qualification is thought desirable. For the award of each overall grade, at least two of the three contributing domain scores must be at the corresponding level or higher. Thus, a candidate scoring a (7), c (5) and f (2) in the three domains will achieve grade C overall (a total of 14 and two grades at c or above). On the other hand, a candidate with a (7), d (4) and e (3) would fail at C and be awarded D since only one grade is at c or above, even though the total score of 14 is the same.

Examples

Draft criteria for Grades F, C and A in aspects of GCSE chemistry. Domain A: Knowledge with understanding

Domain A	F	C	A
1 Languages: terms, symbols, quantities and units.	Recognize chemical terms and symbols. Know the symbols of elements mentioned in the syllabus. Give the correct units for specified quantities when asked. Write word equations for simple chemical reactions.	Use chemical terms and symbols correctly in a range of contexts, without prompting, express quantities using the correct units. Understand balanced equations and write them for simple chemical reactions.	Use chemical terms and symbols correctly in a range of different contexts. Change the units when required to solve a particular problem. Write balanced equations.

3	The techniques, procedures and principles of safe laboratory work.	Indicate the correct procedure for a single operation. State safe practice for given procedures.	Describe the correct procedure(s) for a multi-stage operation. Explain how dangers can be avoided and can be avoided.	State why particular techniques are preferred for a procedure or operation.
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Domain B	F	C	A
4 Select and present information from a variety of sources.	Select and present a single piece of information from a given source.	Select a range of information from a given source and present it in clear and logical form.	Select and select information from a number of sources and present it in clear and logical form.

5	Translate information from one form to another.	Translate information from one form to another when provided with detailed guidance.	Translate information from one form to another without the aid of guidance.	Translate information from one form to another without the aid of guidance.
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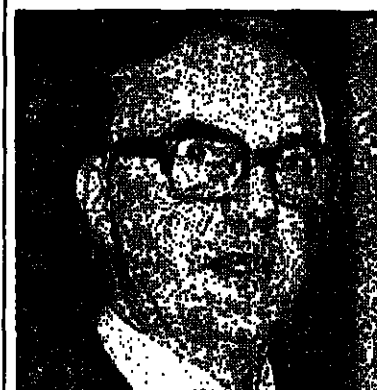
8	Propose hypotheses and make predictions.	Recognize which of two given hypotheses explain a set of facts or data. Use a generalization to make a valid prediction.	Generate a hypothesis to explain a given set of facts or data. Use a generalization to make valid predictions.	Generate a hypothesis to explain a set of facts or data. Use a generalization to make valid predictions. Make predictions involving the use of models and generalization.
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Domain C	F	C	A
11 Organize and conduct investigations.	Carry out a one-stage investigation using a single piece of apparatus, given instructions written or oral instructions.	Carry out a multi-stage investigation systematically, given instructions on-board at the beginning.	Carry out an investigation, sequencing activities effectively given the minimum of instructions.

13	Evaluate methods and suggest improvements.	Identify a weakness in a method when told that it has one, and suggest a modification to counter it.	Detect, without prompting, a weakness in a particular method and suggest appropriate modifications.	Evaluate a method, the light of results obtained and, if appropriate, suggest alternative methods which would give improved results.
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Domain C	F	C	A
14 Follow written or oral instructions, select and use techniques, apparatus and materials.	Follow written or oral instructions to perform a single practical procedure or, given careful structuring, a series of practical procedures. Select, from a range supplied, apparatus appropriate to an experiment. Where more than one technique is possible select the one most suitable.	Follow written or oral instructions to perform a practical procedure involving a number of distinct stages. Select apparatus, techniques and quantities of reagents appropriate to the experiment being undertaken.	Follow written or oral instructions to perform a practical procedure involving a number of distinct stages. Select apparatus, techniques and quantities of reagents appropriate to the experiment being undertaken.

15	Make and record observations, measurements and estimates.	Make one end, with guidance, further observations during an experiment and record them in a comprehensible form. Read uniform scales to the nearest numbered subdivision.	Record clearly and accurately a wide range of observations. Read scales accurately and make good estimates of quantities.	Record clearly and accurately a wide range of observations. Read scales accurately and make good estimates of quantities.
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John Woolhouse: options

TVEI director attacks HE 'distortions'

The man who heads the Government's programme to bring vocational studies into the schools attacked higher education institutions this week for distorting the whole of secondary education. Mr John Woolhouse, the Manpower Services Commission's Technical and Vocational Education Initiative director, told an audience in London on Wednesday that there were still too many people in some of those institutions whose frame of reference was limited to the small percentage of the population who entered higher education.

The institutions' adherence to "a narrow and specialist perspective of higher education" was the root cause of our lack of broadly educated executives, managers, and administrators of "the intellectual bottleneck in our sixth form curriculum with its constraining and distorting effects on secondary education as a whole."

Mr Woolhouse who was speaking in a personal capacity in the course of delivering the 1985 Stanley lecture at the Royal Society of Arts, identified this narrow view as one of the obstacles to the far-reaching changes which other educators wanted to see.

Britain had the facilities and the technology to provide access to education for all who wanted it, if the resources were managed effectively and with imagination. Educating people for the professions was only one of the objectives, said Mr Woolhouse: but it had wider implications than the economy.

The more people developed their skills the more they were likely to enrich in a variety of ways the communities in which they lived. And the greatest contribution Britain could make to the Third World was to educate more professional workers with the skills to teach and support nations facing far tougher economic and social problems than ours.

"I believe that the education service cannot dissociate itself from the responsibility of preparing the whole of the population - or the great majority of it - for the exercise of their minds and energies in a profession or calling."

Turning to the scale of provision that would be required, Mr Woolhouse estimated that to catch up with Japanese and American staying-on levels of around 80 per cent, another 532,000 places in full-time education would be required for the 16 to 18-year-olds at a gross cost of £1,064m. To enable half of the 16-year-olds to stay on would require 100,000 additional places.

Of the total population of working age, only 4.4m were now in full-time education. Mr Woolhouse set out options for arranging from the provision of a week's education a year for one million more of the adult population, which would need 28,000 places, to one month for 100 million people, which would need 1.12 million places. And a year's full-time education for only 1 per cent more of the adult population would require 340,000 places and 17,000 teachers.

"To see the opportunities that are open to us we have to begin both nationally and in each education authority to formulate plans to build up a capability that will enable us to move progressively towards major expansion at a relatively modest cost," he said.

SCHOOL TO WORK

Youth year revolt on strategy

A last-minute revolt against the policies of the Government-funded committee running Britain's International Youth Year programme is being staged by young people on the committee. They want its remaining cash used to provide a platform for the views and demands of the country's youth.

A meeting of the committee's youth delegates over the weekend has brought to a head their increasing disquiet over the way they have let the programme steer clear of controversial youth issues such as the new Government restrictions on supplementary benefit, youth unemployment, and housing for young adults.

The delegates say that some adult members of the committee, among whom are representatives of youth service organizations and the Department of Education and Science, fear

that open criticism of the Government could prejudice the future funding of their work and of youth activities generally.

The meeting agreed an emergency programme for the rest of the year, to include a national conference at which young people put forward their own proposals for dealing with the main youth issues. The conference would also need to consider ways in which local projects started under the IYY programme could continue to be funded.

The delegates were confident that with the support of friendly adult organizations on the committee like the National Youth Bureau and the National Association of Youth and Community Education Officers, they would get a majority for their plan at yesterday's session of the committee. Mr Waheed Ali, a British Youth



International Youth Year 1985

Council vice-chairman and the committee's official spokesman, said: "We had hoped that IYY would deal with the political realities of 1985, but it has

become apparent that the whole framework of the committee, with its dependence on Government funding, has inhibited this."

Ms Janice Smith, the committee's chair, who was also at the weekend meeting, said: "We see the conference as a platform, not for purely negative criticism, but for constructive proposals to deal with the real problems facing young people in 1985."

"And it is very important that people who have been involved at local level, where the most effective action has been taken, should get together to discuss the future."

Among other things, there is the whole question of continued funding for some excellent projects, like work cooperatives and drug help centres, which have been started up during IYY.

Warning on poor provision for young

Youth service per capita expenditure on 14/20-year-old population, 1978/79-1982/83

November 1983 prices, £'s

(percentage change on previous year)

	1978/79	1979/80	1980/81	1981/82	1982/83	% Change 1978/79-82/83	% Change 1979/80-82/83
Total, England	21.14	22.31 (5.6)	20.83 (-7.5)	20.14 (-3.4)	20.26 (0.6)	-4.2	-9.2
Total, England (excl. ILEA)	18.74	19.62 (4.7)	17.74 (-9.1)	17.17 (-3.2)	17.12 (-0.3)	-8.6	-12.3
Non-Metropolitan county councils	16.96	17.20 (1.4)	15.54 (-9.7)	14.84 (-4.5)	14.74 (-0.7)	-13.1	-14.3
Metropolitan councils	20.52	22.00 (7.2)	20.00 (-9.1)	19.36 (-3.1)	19.77 (2.0)	-3.7	-10.1
Outer London boroughs	25.46	27.82 (9.3)	26.28 (-5.6)	27.00 (2.7)	26.33 (-2.5)	3.6	-5.4
ILEA	82	72 (12.1)	74 (2.8)	77 (4.1)	83 (7.9)	33.0	15.6

The report says that it seems that the local authorities have not only been under-spending on the Government's GREA allocations, the calculations on which it bases its rate support grant, but that the allocations themselves were in the first place insufficient to maintain provision.

They were weighted in favour of other kinds of education spending, and then some authorities made matters worse by raiding the youth service grant to help preserve their mainstream education services.

The NYB says that the overall picture is of a national youth service which is fragmenting and diverging in its levels of provision, and moving towards a pattern only marginally related to local need.

The reduction in some areas has been so large, it warns, "that the ability of the service to function effectively must be in doubt".

The report points out that overall youth spending had been increasing in

the years leading up to 1979. The first real cut in provision, it says, was not in the following year, but in 1980/1. This was the year of the first big Brixton and Toxteth riots.

The NYB says: "The significance of that first reduction lies less in its exact magnitude and more in the fact that it happened at all, for in 1979 and 1980 the social and individual problems confronting young people were mounting and youth unemployment in particular had every appearance of becoming not only an increasing but possibly a permanent problem..."

In other words, at a time when the potential need and demand for the service had never been higher and was still increasing.

Expenditure on the youth service, 1978-1983. Douglas Smith. A consultative document from the National Youth Bureau, 17/23 Albion Street, Leicester, LE1.

Labour urges YTS stand

The Labour Party this week offered its support to the Manpower Services Commission if they stand up to Government pressure to cut back voluntary sector and local authority participation in the new two-year version of the YTS.

Mr Barry Sheerman, the shadow minister for training and youth affairs, urged the commissioners to drop their plan to reduce the scale and funding of non-employer provision.

He said: "If that means blowing the whistle on the Government's attempt to extend YTS to two years on the cheap, then blow the whistle they must. They will get much support and credibility in the Labour movement and among trainees and their parents."

Inquiry into student disruption

College teachers are being asked by the Further Education Unit for information about disruptive behaviour by their students. The unit is carrying out a survey to establish the extent and nature of disruption in the FE system.

A preliminary study by the FEU suggests that most disruptive behaviour is caused by various kinds of mismatch in the system - such as that between teachers' expectations and a student's ability, or between the college rules and the outside world.

In a leaflet asking college to send in evidence, the FEU cites information it has already received which suggests that in many cases teachers appear to attract disruption problems. It asks whether teachers' ability to cope with a new clientele or other changes is a significant factor.

Edited by Mark Jackson

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LETTERS

The pupils' needs: schools and staff are best judges

Sir - I feel sure that I am not the only reader to note the appearance in the same issue of *The TES* (October 11) of Harry Judge's article and a report of the unanimous decision by Manchester headteachers for industrial action over the much-publicized "obscene graffiti" dispute. Do they not have a more significant role to play in the continuing saga of the teachers' pay dispute?

I entered the profession as recently as the mid-seventies. As a product of the optimistic fifties and sixties, I gave up the opportunity of a lucrative career in pharmacy because I felt I could do a more worthwhile job for society in teaching. After a frustrating period in two comprehensive in a large city, I left this country to find opportunity, job satisfaction, and a far more dynamic environment abroad.

Now returned, friends tell me that I'm over-critical about the general demoralization and malaise affecting most schools. They say a lot of good teaching is going on. I agree, a lot of good teaching is going on by individual teachers and innovations in curriculum and method of recent years have had a very beneficial effect.

But, try to convince the general public of that - there is much general agreement about falling standards. Didn't Harry Judge sum up the problem in just one small sentence:

"Teachers work for their pupils, and not for the Secretary of State." Must he not have been tempted to quote the old maxim: "A school is as good as its headteacher" or even "The teacher, like the artist, the philosopher, and the man of letters, can only perform his work adequately if he feels himself to be an individual directed by an inner creative impulse, not dominated and fettered by an outside authority" - as written by Bertrand Russell.

A teacher is at his or her best when motivating and inspiring pupils with creative teaching. This is achieved through appropriate teaching material and good relations between the teacher and his or her pupils. Too little importance, and therefore time, is attached to contact time between teacher and pupils. This is partly due to restrictive subject barriers and over-demanding examination syllabuses.

The point is, however, that individual teachers and schools are the best judges of their pupils' needs not bureaucrats in governmental offices. Let's see subject teachers, headteachers, HMs and unions join ranks to bring the control of education where it belongs.

T MADDISON
4 Carlisle Grove
Bishop Auckland
Durham

Great expectations

Sir - That schools must be responsive to local needs is evident to all, but the article by Harry Judge requires some further points to be made on the sad situation confronting us.

The Government, and therefore the relevant Secretaries of State, have a clear responsibility to provide efficient education. Unavoidable confrontation between the teacher employees and those who control the money for their pay has existed since the public's expectations, arising from Mr. Callaghan's "Great Debate" Oxford speech in 1977, ran into this Government's local authority ratecapping and penalty system.

The teachers' "goodwill" concept and commitment to their pupils, which have been (unconsciously?) exploited by school, local authority and government policymakers, has now exploded in their faces. Most policymaker educationists who do not teach very much should, but do not, appreciate the cumulative effects of their post-1977 decisions (magnified by "parent power", ably abetted by Government legislation) on classroom teachers.

The knock-on effects of demanded change and public expectation have now, ironically, made it necessary to end the "goodwill" and unprofessional promotion/blackmail system that has permitted the schools to creak on in recent years.

An appraisal system must be agreed between teachers and employers. Its basis will have to be appraisal by persons with recent, relevant and successful teaching experience in school classrooms. Such a system will not now agreed until there is a realistic definition of a teacher's duties and a limitation set on the averaged weekly hours of work.

PETER HERBERT
Hon Gen Secretary
London Association
NAS/UWT

Micro overload

Sir - I should like to draw your attention, and that of your readers, to the concern felt in higher education for the amount of time students in secondary education devote to computing - and especially those wishing to study engineering. By all means introduce students to computers, computing and electronics but please don't forget Newton, Faraday, Bernoulli, Charles, Brunel, et al.

Over the years, industry has seen the growth, the saturation, and in some cases, the decline of the textile, chemical, electrical, civil and other major industries. Now we have the microelectronics explosion. Students applying for engineering courses - of whatever discipline - offer a whole range of electronic based subjects in very little else. The result is the non-electronic engineering courses struggling to survive and yet they are trying to satisfy a job market which crying out for graduates.

D HOBSON
Engineering Systems and
Control Department
The Polytechnic
Huddersfield

Exam pointers

Sir - Susannah Kirkman's front page article "Exam change hopes dashed" (*TES*, October 11) once again raises the implication that present GCSE examinations are norm-referenced.

Once again we have to draw attention to the fact that the concept of the practicalities of examining which gives rise to this erroneous assumption.

The current GCSE (and CSE) examinations are neither norm-referenced nor criterion-referenced in the strict sense. As Christopher Price remarked (*TES*, August 16) after his own observation of a final meeting of chief examiners, examination results are a mixture of the two and are likely to remain so whenever a large number of candidates are examined, whatever the assessment philosophy adopted behind the examination.

Much time and effort is expended by experienced examiners at the setting stage in designing an examination which gives comparability in standard from one year to the next. Subsequently marks are allocated to the candidates as accurately as possible according to a predetermined marking scheme. Even so, in any examination where there is more than one examiner to carry out the process of examining - and in most subjects at 16-plus there are a large number of examiners - it is necessary to take measures which allow for differences in emphasis between examiners, and perceived variations in difficulty of questions between years which can only be observed on the basis of marked scripts.

The object of the awarders is to hold the standards steady from year to year, through their judgement of the quality of the work submitted; to this end

statistical distributions, and an assumption that where there is a sufficiently large number of candidates the overall performance in a subject will not vary greatly from one year to the next, play their part.

Candidates are judged in relation to what has been achieved over many years on particular, subject defined criteria. The delay referred to by Susannah Kirkman is not one of "norm-referencing" but changing from one way of accounting what an individual can or cannot do at a particular time to another attempt at the same thing. Certainly there are differences, but neither can be dismissed as a norm or criterion-referencing per se; rather both contain elements that accord with each of the assessment philosophies.

Indeed, the educational gain attributable to criterion-referencing applied in the strict sense is a completely new approach to public examining. It is difficult to see how it can be produced by taking away criterion-referencing philosophy and grading system designed to produce an order of merit. The different working experienced by the subject criteria parties on grade-related methods and this out. New examining methods and philosophies must always be under serious investigation by those involved with public examining in any form. What is required is that the end result be educationally sound, fair to all candidates and understood and accepted by the world at large.

JOHN REIDAWAY
Secretary
University of Cambridge
Local Examinations Syndicate

Wrong impression

Sir - I am rather disturbed by the way the article about Russian studies ("Still out in the cold") published under my name in your recent Modern Languages Extra (*TES*, October 4) was edited.

Without my agreement several sentences and parts of sentences were omitted, in a way which significantly altered some of my original points. I wrote of "the lack of any serious attempt" to maintain the teaching of Russian and other "minority languages" in our maintained schools, and then went on to say:

"This point, of course, is that the DES, the LEAs and even the language advisers can all be wholly in favour of and committed to expanding the teaching of these languages, but unless they are prepared to make some changes to the present system of curriculum planning they have no power to introduce or to eliminate a particular subject in a particular school. Good intentions and encouragement are no longer enough. Unless LEAs arrange to allocate certain languages to certain schools, so as to ensure a given percentage of pupils taking each language, the so-called 'minority languages' (and probably even German and Spanish) will very soon disappear almost entirely from the state sector. (Professor Pockney of the University of Surrey warned in his inaugural lecture last year that 'there are signs that henceforth only French will flourish in the public sector'.)"

"Sheffield provided a particularly good example, the more so since Sheffield, I.e., is more sympathetic and supportive than most towards languages like Russian."

The only line from all this which appeared was "Sheffield provided particularly good example" (which is the second half of the sentence). The result is that in the edited version Sheffield becomes an example of particularly "bad" i.e., with no serious intention of maintaining minority languages whereas in the original provides an example of the problem facing Russian even where the LEA is usually "sympathetic and supportive" and is "in favour of such languages" to the teaching of such languages.

Later, the following sentence was also omitted: "The City Council Education Department and the Modern Languages Adviser in Sheffield are very much in favour of such studies and are indeed very active in supporting various projects and activities... This support is invaluable and is very much appreciated by Russian teachers."

Your editors left in a sentence explaining that the average number of pupils studying Russian in each of the maintained schools in which it is taught is 31, but they cut out the preceding sentence, which stated that there were two schools in Sheffield with 60 pupils each studying Russian.

It is unfortunate that the editing made Sheffield I.e., appear in a worse light than was the case in the original article.

DAVID PEARCE
64 Sydney Road
Sheffield

Letters for publication should be typed on one side of the paper only. The Editor reserves the right to cut or amend them.

How African famine is rooted in cash crops

Sir - Frances Morrell was right to stress the need for schools to "be concerned with knowledge and understanding" in the "proper" study of world hunger. (*TES*, October 4).

However, teachers should recognize that some of our commonly held perceptions may well be challenged in this search for "knowledge and understanding". Famine is not a natural disaster, as we are led to believe. Famine is not caused by lack of food, but by the poor being too poor to purchase it.

The world produces enough food to feed a population four times that of today. At present the West consumes five times as much grain per person as do Third World inhabitants - most of it is fed to animals to produce meat and dairy products.

It is the poor who go hungry. In the 1973 famine in Ethiopia, vegetables, cotton and cereals were being exported. Even today, Ethiopian cash crops such as coffee, pulses and vegetables find their way into the British shopping basket.

Famine is caused by international economic relationships. Colonial exploitation left the economies of many Sahelian countries dependent on the export of cash crops, subsistence crop production having been neglected. Commodity prices of cash crops have fallen by 30 per cent since 1980, leaving countries and individuals too poor to invest in increasing agricultural production, and too poor to deal with disasters like drought. It is the powerful West that determines world commodity prices.

Famine is caused by internal economic relationships within Sahelian countries. Successive governments in Ethiopia have been dominated by Amhara-speaking peoples who live around Addis Ababa. The unrepresentative governments have neglected investment in provinces like Tigray and Wollo. This pattern of political Sahelian is paralleled in many other

The belief in food aid as a solution to this problem also needs to be questioned. Teachers preparing to tackle

such complex issues obviously need resources. Help and advice is available at development education centres throughout Britain and Ireland. These centres have been working with teachers on development issues for many years and have a wealth of knowledge, resources and expertise.

Leeds DEC has produced a comprehensive resources guide, *Understanding the crisis in Africa*, which is free on request from the National Association of Development Education Centre. For more information about the work of DEC and the Development Education Network, contact Sandy Henderson and/or Tony Williams at the address below, or telephone (01) 730 0972.

The Schools for Africa appeal is in many of our schools - let's make sure our educational response is as anti-racist as well as humanitarian.

NADEC Communications Committee
128 Buckingham Palace Road
London
SW1W 9SH.

Public duties

Sir - Much has been said about "freedom of speech" in the debate over Mr Ray Honeyford. One point, however, that seems to have been ignored is that free speech also carries with it considerable responsibilities; it is a right that should not be abused.

By the very nature of the headteacher's role, there have to be constraints on what he/she can say. Surely it is wrong and irresponsible for one to suggest that headteachers have the unrestricted right to express publicly their own personal views regardless of the effects on the wider community of which their schools are an integral part.

The role of the school (and therefore that of the headteacher) must by its

intrinsic nature be a positive and constructive one. If headteachers adopt negative and overtly hostile attitudes to their community, particularly if it is a multi-racial one, they will be sowing the seeds of social division and racial tension. Such an attitude could be seen as not merely dangerous, but downright unprofessional.

Like many other headteachers, I have always been committed to the concept of the "community school". The school is not an island cut off from its locality. It is and should be an integral part of its community. The success of a school can depend a great deal on the level of trust and understanding that it can create between itself and the home and community. If there is open conflict between the two, that is a recipe for educational disaster.

The notion of the school as an

"impenetrable fortress" determined at all costs to defend a colonial concept of "British culture" is not only an educational nonsense, it is a dangerous anachronism and must be resisted by all educationists. "British" does not mean "being white". Britain is a pluralistic and cosmopolitan society. It draws its strength and vitality from this cultural diversity. Our schools should reflect this; they should mirror the "real" world in which our children live and have to grow up.

A "real" mentality to our schools and community is a dangerous and unacceptable fantasy and has no place in the Britain of the 1980s.

ALEX FELLOWES
Drummond Language Centre
Bradford

gious and multicultural society.

It also demonstrated beyond any doubt that the Prime Minister does not care about the feelings of black people in this country. It is no wonder, when the Prime Minister of the country gives respectability to a person harbouring strong racist feelings, racist attacks by white thugs on blacks and their children in schools are increasing daily in different parts of the country, especially in metropolitan areas.

RAJ RAY
Co-ordinating Secretary
National Convention
of Black Teachers
PO Box 30
Pinner, Middx
David Lister writes: The demonstration was timed for after *The TES* went to press. Therefore, we could not report on it.

Unfortunately, the Prime Minister's patronage of Ray Honeyford, symbolized by his recent visit to Downing Street, appears to have given the green light to others with similar views. The time has come for local education authorities to demonstrate their commitment to multi-racial education by removing the Honeyfords and Fullers from their positions of authority.

We hope that the students, parents and teachers of Waltham Forest will take the same principled and committed stand as those opposing Honeyford in Bradford.

ANNIE BLACKMORE
William Morris senior high school
Gainsford Road
London E17



Surplus food is not the full answer.

Food first

Sir - I was amazed to read about the hostility by some of the development agencies towards the School Aid for Africa project (*TES*, October 4).

I assume our school was not unique in receiving a video, with the sacks we ordered, which explained the project. Yes, it did show a starving child, but it did not make it seem that the parents did not care!

Yes, it did ask for food, but it also stated emphatically that sending surplus food was not the full answer. It made it clear that the aid most needed was in long term development, which would, in the end, help these people to help themselves. It stated the need for education programmes, as well as afforestation and irrigation schemes.

A section of the video dealt with some of the many myths that adults as

well as many children have about Africans, such as that none of them is very intelligent, or that they all breed like rabbits and so on! It tried to show how superpower intervention and the greed of the developed world has helped to trap these people in poverty.

The message in the video was a potent one. It made the children aware. It invoked feelings of empathy - as one third-year pupil, in conversation with friends was heard to say, "Really, we have everything and they have nothing."

The food the children give is tangible proof of their concern. Can this be bad? I at least have faith that Band Aid will do everything in its power to try to get that food to where it is needed!

K M JONES
71 Station Road
Lower Standon
Henlow
Beds

Tourist class

Sir - Angela Humphrey related with some grace how she had avoided paying £5 for a Tanzanian map and only parted with an old T-shirt and a handful of toffees (*TES*, October 4). Perhaps she might like to remember she comes from one of the countries with the most surplus wealth and, in a cruel metaphor of all North - South relationships, is ripping-off one of the poorest 15 countries in the world.

She could also link her behaviour to the failing electricity supply in her hotel. Power cuts are often caused by breakdowns and lack of spare parts in the generating industry. To obtain spare parts an underdeveloped country needs hard currency and, to do that, needs to export goods or materials, or even attract more tourists who will make a genuine contribution to the economy as well as enjoying the wildlife that it costs the country to con-

serve. Tanzania does export materials - largely foodstuffs - but as has been very obvious to many consumers, the price of coffee for example is virtually static. Yet the price of tea, for example, is not static and the terms of the trade are therefore moving against such countries.

Finished goods create a better return for the exporting country, but the prospects of undertaking this manufacture efficiently are substantially reduced by breakdowns in, yes, electricity supply. So it gets harder to produce the goods to earn the currency to pay for the parts to enable the goods to be produced.

It may be a small thing, but £5 for the map is development aid now, rather than famine aid later.

I McCALMAN
33 Balmoral Terrace
South Gosforth
Newcastle upon Tyne

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Long live the dispute

D H GILLMAN

I am a teacher's husband, and I say "long may the present industrial action continue".

For the first time in 12 years of married life my wife is coming home from a day's work without another two hours' worth in her bag. For the first time she is having a regular break in the middle of the day when she can uninterruptedly take refreshment. She is no longer exhausted and drained of nervous energy at the end of the day. Since the start of the present dispute, my wife's school have operated the so-called Continental day.

Teachers have always known that afternoon lessons - those which follow

the midday break and aimless hanging about of bored kids looking for trouble, being "policed" by unwilling and harassed teachers - are far less effective than those which precede it.

Doing away with this long interval and concentrating the day serves to concentrate the minds wonderfully. Discipline improves as does staff morale. Two short breaks are allowed during the morning, and the school lunch is provided for those who wish it at 1.30 pm. prior to departure for home. Those who do not take the meal may leave at 1.30 p.m.

The staff are then free to use the afternoon for marking, administration and staff meetings which previously could only be carried out after 4 pm. When teachers were tired and drained following a continuous struggle to control teenage children whose parents cared very little about what their offspring did as long as they did it away from home.

My wife reports that the quality of staff meetings has improved in line with the quality of pupil contact time; curriculum innovations are going for-

ward at twice the pace, and, best of all, staff are going home at the end of an eight hour day without those piles of books and papers. The millstone has been removed.

When asked what part of the proposed teachers' contractual duties they would most like to see changed, teachers I spoke with were unanimous in claiming that covering for absent colleagues was the single most stressful factor in present-day teaching.

Few teachers have more than two hours per week non-contact time. In that two hours (often less), marking, administrative duties, pastoral duties, clerical work (often with ancient and outdated equipment), telephone calls to colleagues, examination boards, not to mention lesson planning, stock requisitioning and dealing with correspondence all has to be covered.

Only a teacher will appreciate the problems involved in making a telephone call out of a school. To receive the dreaded note assigning you to "cover" in that precious time can only be described as mental cruelty. No wonder so many teachers take time off - it is a vicious circle.

So, I call on Sir Keith Joseph to throw away his beastly charter and start again. Re-think the whole situation. Take a leaf out of the European schools' book and let teachers do what they trained to do - teach, not police, not entertain, not babysit other people's children. In the long run, that is where you will get your quality profession from - the teaching force itself will be fitter both mentally and physically, resulting in better teaching, better results, and a better society.

I still want my wife to give up teaching and take a job where she will gain the respect of society and be better rewarded for her skills and talents, but she won't. She is one of those dedicated types on whose backs British governments have ridden for the past 100 years.

How dare Sir Keith Joseph talk about "traditionally accepted" duties of teachers. I have never yet met a teacher who "accepted". They have all "endured" and for far too long.

Liaison starts now

RAY CHAPMAN

To teachers entrenched in the high powered world of secondary education, junior school liaison has a rather alien if not threatening ring to it. The freeze-lined rooms of nature tables and star charts not to mention bubbling enthusiasm for anything from sniping in assembly to picking up litter, seem far removed from the relatively formal lines of senior schools.

Apart from scamped meetings and visits by those designated by position not necessarily by interest, the liaison process can assume a hurried, token form. Secondary schools, with polite, patronising authority, take over the reins with little genuine regard for what may have gone before.

The effect on the pupils of such a token liaison service is not obvious as all concerned parties agree that this transition is traumatic.

However, the strangeness of build- ings, the bewildering array of new staff and fellow pupils, the new standards to adhere to and a wide-ranging curriculum to grapple with can all leave pupils either over-suppressed or over-reactive. Their previous modes of be- haviour may produce a rebuke and this increases the general feeling of not belonging and, saddest of all, not being wanted.

The answer is simple and is being recognised by many schools. Liaison with feeder schools is a year-long process embracing at the one end a visit at the end of September with a group of pupils back to their old school for a morning assembly, through to structured, meaningful visits in the summer term by all the new intake. In between a regular pattern of contact among staff and pupils covering social, sporting, pastoral and curricular



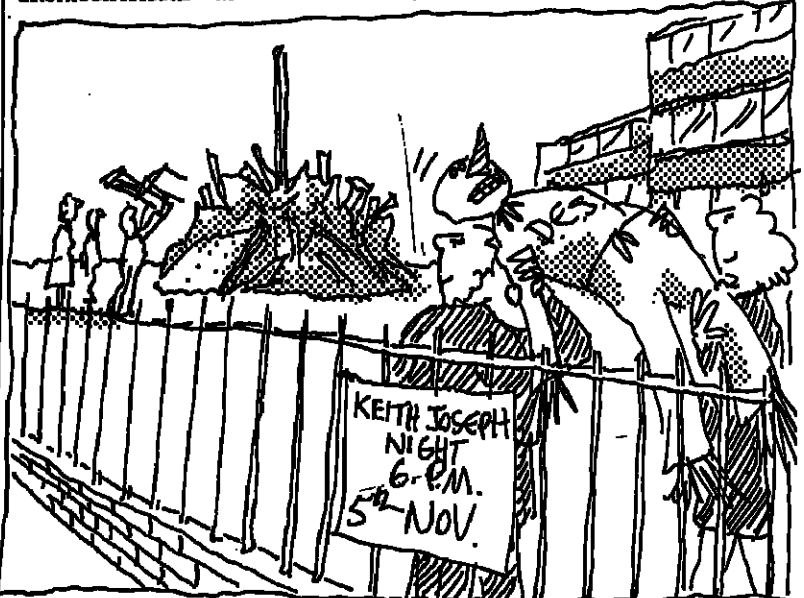
Aspects can only enhance the stress and inevitable transfer of children.

It means a great deal to young- ings to have a familiar contact, to be in their form tutor and spend a "getting to know" the rest of the class before the summer holidays much to dispel the apprehensions caused by the long break.

Pupils need a gradual introduction to their secondary school and rewards although hard to identify nevertheless plentiful. All senior school pupils start as first year- ings, universally serious approach to school liaison, by staff with the same and personality to make it work can produce benefits in all areas.

We are at the time in the furthest away from any thought next year's intake. I think, and someone should be thinking about

Ray Chapman is head of Park Hall School, Solihull.



Needs of the under-fives

MARGARET ROBERTS

I would like to make the following points regarding Jennifer Myers' Talk-back article (TES October 4) and her reference to research into the disadvantages of summer-born children during which she attacks the recent PPABACE policy statement *Four Years Old But Not Yet Five*.

● The research projects to which she refers (reported in the NFER journal, *Educational Research*) were carried out in the late 1950s and early 1960s and related to the fact that summer-born children tended to be the youngest in their infant classes, and to do less well than older children in their later schooling.

● The children in question, on transfer to their junior schools, were streamed either according to age, or to attainment. This resulted in a widening of the gap between the older and the younger children in terms of their scholastic attainment, usually measured by reading age. By this time

length of schooling was not a clear-cut factor.

● The research projects raised more questions than they answered. Confusion remained as to whether longer in school or simply being older was the explanation for more older than younger children being more successful. Douglas Pidgeon, then deputy director of the NFER, wrote: "It might seem, however, that the only true solution to the problem is the individualizing of learning, in which children compete only with themselves, and are not taught as a class".

● These research projects at no time suggested or recommended that children should start on a five-year-old curriculum at four years of age. In fact the later Plowden Report recommended that the infants' school stage be extended to eight years thus introducing the concept of the first school following nursery school class provision for under-fives.

The British Association for Early Childhood Education (BAECE) is not against children having education at four years if this is what the parents want, providing it is carefully planned to meet the needs of these children as it is for later stages. Provision should include space, time and opportunity to explore and learn through play activities in a suitably equipped environment, with a ratio of at least one adult to thirteen children, as recommended in the 1972 White Paper by Mrs Thatcher, when she was Secretary of State for Education and Science.

Many four-year-olds are now being enrolled in reception classes with five-year-olds, sometimes with six-year-olds, where they are again the youngest children. Further in their second year in school they are frequently referred to as "middle infants" a term previously reserved for six-year-olds.

BAECE would urge I.E.S.s to conduct very careful monitoring of these young children, with regard to their health and emotional well-being as well as their later scholastic achievement. At the moment there is no clear policy or guidelines for the education of four-year-old children within the primary sector. Knowing what we do about the importance of the early years every effort needs to be made to safeguard the physical and mental well-being of these young children.

Margaret Roberts is President of the British Association for Early Childhood Education (BAECE).

Personal writing

ALICIA STUBBERSFIELD

Brian Cox's article (TES October 4) about the importance of personal writing in the teaching of English is laudable and I should like to add some comments in the light of recent experience.

I hold the post of teacher in charge of creative writing in a large comprehensive school which has an excellent reputation for its results in public examinations, particularly English. The English department is a large one with more than 14 full-time members.

The nature of my post has allowed me the freedom to develop it as I wish, so I have run junior and senior writers' workshops, organized visits to the Arvon Foundation, taken students to poetry readings, used writers-in-schools schemes, produced anthologies of writing and tried to influence the method and content of the department's teaching. Here lies the difficulty.

English teachers seem surprisingly resistant to poetry writing, expressing merely their own dislike of poetry (thus confirming Brian Cox's view of Eng. Lit. teaching at all levels) or treating the whole business with a Patience Strong sentimentality which effectively removes the necessarily vigorous approach. They see poetry as a thing apart from the usual English curriculum.

I have just organized and run a poetry fortnight which involved replacing our usual teaching programme with a fortnight's reading and writing of poetry, culminating in the visit of the poet and novelist Nick Jackowski. The concept was well received, as was a booklet of ideas produced by myself and a colleague.

Unfortunately the use of this booklet illuminated the fact that teachers actually interpret innovative ideas according to their own way of working, thus making a change in their style of teaching almost impossible.

Despite clear instructions to avoid rhyme with first year pupils, sheets of doggerel were offered for inclusion in the anthology of writing arising from the fortnight. This meant of course



have also been offered with a few terse comments on technique, such as "avoid repetition" written in the margin and then a glowing word of praise for the quality of the description (which actually was notably hackneyed). Other staff produced nothing at all.

Children of all abilities can learn to write with originality and flair but it depends on their relationship with the teacher and that teacher's attitude towards and honest appraisal of their work combined with an acceptance of the importance of the work to the child.

Brian Cox states that he is "not sure what are the best techniques" for teaching creative writing. I'm not sure that there are any, other than the ability to talk through the poem with the writer, developing strengths and criticizing weaknesses with rigour.

All too often a poem is accepted as something which is essentially embarrassing and, therefore, not worked on in the same way as any other piece of writing. Equally, a child may receive few comments on style and be sent away to write a second draft, scarcely understanding anything about the process.

If pupils are to produce poetry which is "crafted" and shows a development of verbal skills, they must be in-

terested in the process of writing such poetry. This interest can come from the teacher's interest in their piece of work, the ability to praise what is good, to criticize what is bad, yet always to be the critic and not the criticizer. "Were you pleased with it?" "I think it's very good?" or "I like that word, can you use a better one; a more unusual one?"

One second-year pupil expressed her mother a better way of saying lightning than shaft, but we eventually she found a way of saying dark sky being "out" by the moon.

All my classes are mixed ability and nurturing of this interest in the process of writing is not confined to the top of the ability range. In the second-year pupils can write using figurative language, aided by a visual aid.

In the light of Her Majesty's Inspectors' recent remarks on the importance of writing in most schools it is being given to someone in the new examination system and a new awareness in years 10 or 13

'The most integrated school in Britain'

All pupils benefit when severely handicapped children are put in ordinary classes, Howard Sharron reports.

For the determined, if battle-fatigued, advocates of integration for children with special needs, Springfield Road Junior school near Burton-on-Trent but in Derbyshire has achieved something of the status of Mecca.

Parents of handicapped children in the midst of endless rows with reluctant education authorities visit Springfield Road for inspiration and emotional support; academics cite it as an example of what can be done given the professional and political will. In its fight against the "labelling" of children with unusual educational needs, Springfield Road has acquired its own label - the most integrated school in Britain.

Like all other labels, headteacher Ian Mitchell does not take this one too seriously. But he is extremely proud of what his school and the Derbyshire local authority have been able to achieve: a school where children once categorized as severely and mildly educationally subnormal, learn and play together with ordinary children.

Originally, separate units for educationally subnormal children, including a special group of physically and mentally disabled children and a special nursery, occupied the same site as the main school. The teachers shared a common staff room but the units had their separate heads and although some of the less disabled children joined in assemblies and lunches, there was more educational contact between the two special units than with the main school.

But in 1982, in the midst of the debates surrounding the Warnock Commission, Ian Mitchell and Anne Jones were appointed head and deputy head of the school because of their commitment to integration. And when the head of the unit for the severely subnormal left and was replaced with a teacher who shared in the desire to break down the barriers, some remarkable things began to happen.

'We started looking at the curriculum from the point of view of the experiences children could gain from it'

Profoundly handicapped children were moved from their outlying unit and placed in the main school building and a group of seven to nine-year-olds from the main school took their place. The headteacher's office was also shifted into the former special unit, in an attempt to break down the stigma attached to that building.

Classroom changes began with the creation of "club" sessions two afternoons a week where all the children were mixed for craft work and "adventure" activities. The benefits worked both ways, says Ian Mitchell, it proved to be of immense social importance to children with special needs to mix with ordinary children. They in turn gained from meeting children different to themselves, and from the better pupil staff ratios, because of the extra teachers provided for handicapped children.

But division began to emerge within the staff. There were two camps; those teachers who positively enjoyed the sessions and felt they offered something to all children, and those who felt the more able children were not being pushed enough. Some teachers felt the clubs were marginal to the main curriculum and therefore fragmented it, and that the competitive nature of some of the activities, such as outdoor games, was harmful to integration.

However, instead of laying down a line, Ian Mitchell sent round a questionnaire asking which staff would be interested in co-teaching mixed groups and in devising their own curriculum for these children. The views of those staff opposed to integrated teaching were respected.

One of the ideas to emerge from the enthusiasts was a project afternoon for seven to eight-year-olds which would include children from all three parts of the school and involve team teaching of four small mixed ability groups. The educational content of the project afternoon was to be the subject of "water" and, according to Ian Mitchell, it worked brilliantly.

"Teachers from the different units were able to offer their diverse experiences and provide different things for different children. Water play, for example, provided fine motor-skills training for some children and intellectual and social education for others. We started looking at curriculum from the point of view of the number of experiences children could gain from it, rather than keeping to a narrow concept of education."

"The project afternoons changed our attitudes to teaching different kinds of children. Originally there was a view within the school that mainstream teachers knew nothing about the teaching of children with special needs and vice versa. But it soon became clear that there was a tremendous overlap in curriculum and skills."

Expectations for the "handicapped" children subtly changed as many of them began to manifest abilities no one before had suspected. Ian Mitchell recalls how one ESN(S) child who was unable to hold his head properly surprised everyone when he returned from a trip to a water mill and was able to draw a layout of the mill as well as the other children. He had an understanding of symbols which had not been guessed at before.

The removal of the stigma of special children and special teachers had a profound impact on the way teachers approached their jobs, says Ian Mitchell. There was a much more positive attitude, and a complete absence of the cynicism so often experienced in special school staff rooms, he said.

Last year, the project or topic afternoons were extended from once a week to five times a week. The topic chosen was "communication" - partly because communication was a problem for some of the children involved and because it had so many aspects: geographical, mathematical, historical, scientific. The sessions also included PE, art, craft and drama.

By the end of the year all children in the school were involved in some form of integrated education with several classes being permanently reorganized to include children with moderate learning difficulties.

And now both the moderate and severe ESN units have ceased to exist. All their former pupils - barring eight with moderate difficulties who have particular requirements - have been completely integrated into mainstream classes. And it seems only a matter of time before the remaining eight children permanently take their place alongside ordinary children in ordinary classes.

The first year consists of one class with eight ESN(M) children and eight mainstream children; one with 19 mainstream and three ESN(S) children; and one class with 18 mainstream children, two with moderate learning difficulties and one child with severe learning difficulties. All these classes are taught by a teacher and a full-time assistant.

A typical second-year class has 12 or 13



Expectations changed as the handicapped showed what they could do.

mainstream children, two with moderate learning difficulties and one child with severe difficulties, and is taught by one teacher with a teaching assistant for 80 per cent of the week.

The third year is less integrated: there are two completely mainstream classes and one class of eight ESN(M) children, taught by single members of staff. But they do maths, topic work, games, swimming and art together.

In the fourth year there is a class with 20 mainstream children, and eight with moderate learning difficulties taught by two full-time teachers. This class also works with the nursery and special care class. The older children read the special children stories, are involved in monitoring their progress and in designing computer programs for their education.

The Special Care group, whose ages range from two to 16, are in their separate unit because of their medical conditions. But as well as their regular contact with fourth years they also have joint sessions with children in the special nursery, who also link up with fourth years, first years and a mother and toddler group which the school runs. No single group of children is isolated from other children.

Anne Jones, the deputy head, says integration has resulted in formidable planning tasks. Constant discussions are required to assess each individual child and great use has to be made both of informal records, such as notes and diaries, as well as formal monitoring records. The progress of each child with special needs is regularly reviewed by panels which include teachers, the parents, paediatricians and other professionals.

Of the positive results of integration, she is in no doubt. "We have seen children of all abilities develop in their self-confidence, self-esteem, self-respect, awareness of others and in their socialization and cooperation. I heard one child with moderate learning difficulties say to a very bright child "You look puzzled, can I help you?"

"The main stream school children have been very helpful and don't seem to be frustrated at all by a child's lack of ability. Quite the opposite, in fact, they take extra time to explain things and to praise their efforts. We have also seen firm friendships develop with children taking their special friends to assembly and helping them during playtime. In return the confidence of main school children has been improved by the relationship with a handicapped child."

Whatever worries the parents of the special children had in the beginning, they have now evaporated. Mrs Ruth Grace, whose 10-year-old daughter Rebecca is slightly mentally retarded said: "I did have reservations; I thought Rebecca would get pushed into a corner and left. She also had a limited concentration span so I thought she could get very bored."

"But she is in an ordinary class now fulltime and things have worked out very well. Her speech has improved greatly, socially she is much happier and much more vocal, and she is a little more independent."

Hilda Grant's five-year-old daughter Emily is severely mentally and physically handicapped. She

'Children of all abilities develop in their confidence, self-esteem and awareness of others'

is in the special nursery where there is regular contact with fourth years, who have devised individual programmes for the nursery children so they can work with them on a one-to-one basis, and with the first years.

"I was told that Emily would just lay in her cot and die," said Mrs Grant. "But since starting at Springfield she has developed tremendously. She is encouraged by the other children to walk in her frame - they wobble it and push it and make her walk, and at playtimes the children queue up to take her out. One of the older boys, Andrew, even made up a computer program to help Emily. Nothing like this could happen in an ordinary school."

Mrs Hazel Wood, whose 11-year-old son Nicholas is very bright, said: "I really can't work out who gains the most, the normal children or the handicapped ones. Nicholas has only been here for two years but he has literally blossomed."

"It has given him a sense of responsibility; he plays very carefully with the children and is very perceptive about their needs. I feel it has also helped Nicholas come to terms with himself - to understand that he can't be good at everything and that he has to try, like the disabled children, very hard to master things he is having difficulty with. I think he is getting a wonderfully broad education."

FEATURES

Hogan's Run

Hugh David puts himself in the hands of ten teachers on a 'safety in outdoor education' course.

Sometimes it was like a commando yomp across East Falkland. At others, particularly when we plunged through a sea of dead and dripping bracken, crawling to get under fallen trees, it was more like a re-enactment of scenes from Redmond O'Hanlon's *Into the Heart of Borneo* (Penguin, 1985). But mostly it was like the former. During the afternoon military jets roared overhead and the crack and close-following whine of rifle fire could be heard echoing round the hills from an Army range.

This was Hogan's Run. The ten of us in Badger group had donned kagools and Karrimor rucksacks, boots, balaclavas and waterproofs to hack across an area of open moorland somewhere near the top centre of sheet 137 of the 1:50,000 Ordnance Survey map. The SAS did similarly foolhardy things half-way down the adjoining sheet at their training camp near Hereford. But they were the SAS. They were fit. They weren't 20-a-day men. They hadn't been up until the small hours the night before.

Panting, I snatched a look at the map. Sheet 137 covers most of Vaughan Williams' and A E Housman's Shropshire. Wenlock Edge was only a few miles to the east. I noticed. But right then even that was small consolation. Out there in the drizzle on Long Mynd we were in the thick of it with little more than a map, a compass, a couple of chocolate biscuits and an apple carefully saved from lunch to get us back to the minibuses.

At 15.10hrs we took a five-minute break on the crest of a ridge. I rescued my tape-recorder from my rucksack and dutifully reported that I had just heard one of our number say there were over 400 (or was it 4,000?) varieties of wild blackberry growing in Britain. Even then it seemed a signally useless piece of information. A few days before I'd been covering the Brixton riots.

Surely I should have been saying something more significant, something about counting them out and counting them all back, perhaps. What was I doing? Come to think of it, who did we think we were, out there in the drizzle on the top of Long Mynd in early October?

Luckily, our group leader had no such doubts. Full of confidence, she turned to address us later in the afternoon, when we had finally descended a few feet below the tree line: "Now, what do we do after we've been through a gate? That's right, we shut it."

Quite rightly, Katrina was treating us like a class



Coping with casualties: In school teachers are experts, here it's different.

of children. Every profession has its firebrands, and Katrina and her team of Badgers were a sort of Surrey teachers' SAS; a plucky group who are or soon will be responsible for taking school parties from Mitcham, Weybridge and Camberley out on visits, journeys and field trips - and bringing them all safely back.

Biologists, geographers and geologists by training, they took this sort of thing in their stride. They had volunteered for it, and happily boarded a coach in Baginboto knowing that Hogan's Run and four more days of similar punishment lay in store up here in Shropshire. What was more, after three days they were still enjoying everything that Roger Horsfield, Surrey's general inspector for environmental studies and the staff at Preston

Montford Field Centre could throw at them.

Officially they were taking a course on health and safety in fieldwork; unofficially they seemed to be hurling a gauntlet in the direction of 22 SAS over the hills in Herefordshire.

Before I even met them they had survived sessions of caving and pony trekking, half a day's canoeing on the River Severn, eight accident simulations staged with full blood and gore by the Casualty Union and a full programme of lectures on first aid, safety, disaster procedures and navigation. The previous night they'd slept rough in the hills.

"But you wouldn't put kids through anything like that, would you?" I asked Roger Horsfield as we blindly followed a compass bearing into an

apparently impenetrable pine forest.

"No, of course not. But, you know, the weather can change; even a gentle hill walk can turn into something very nasty. It's vital that teachers who organize outdoor education know what they are doing. These five-day courses that Surrey run up here are an attempt to give them at least a taste of everything. They're not going to be expert canoe instructors or first aiders at the end of them, but they should be able to see where problems could arise."

The weather worsening by the hour, we hacked on. Then Roger Horsfield stopped us by a line of flattened grass: "Badger tracks, look! Did you know the average badger-track is 11 inches wide? Well, it is. But look at that. That's a beautiful, veritable badger-motorway." We looked, impressed; but no one took a photograph as they did a moment or two later when we came across particularly lush growth of bracket fungus on a fallen tree.

"Why is a mushroom happy?" one of the Badgers asked Katrina while the shutters clicked. She didn't know. Neither did I, and expecting another lesson in biological science I reached for my tape-recorder.

"Because he's a fun guy!"

Shrieks of laughter momentarily drowned the distant rifle fire. Then, as we ploughed on, Roger Horsfield caught me up again: "Before you ask, these courses are not a panic reaction to incidents like the Land's End tragedy. They are something we've been doing for a couple of years now. If you like, they are a considered reaction to the HMI survey."

That was a good way of putting it. The recommendations of the Inspector's report, *Learning Out of Doors*, underlay every activity on the five-day courses. Glancing through them out there on the hills I felt a surge of confidence. Everything was going to be all right. "In aspects of outdoor education the safety of those involved should be a prime consideration," Guidelines on safety should emphasize that safety conduct is never an 'extra' consideration, but an essential part of each activity.

Participation in the courses brought

Law for the poor

Life skills? Nikki Foster's YTS class can teach her a thing or two

The Law and You: could there be a simpler title? I've never yet met anyone who relates to life and social skills, the title so affectionately used by the Manpower Services Commission, and the staff of life for all Youth Training Schemes. It sounded fun to me, The Law and You.

"Me and Sharon got done for some earrings. Eight pairs actually. Remember Shaz? Them Mexican silver ones were great." Sharon sniggers behind her hand. "And we got done for some make-up, but we never nicked that, only they wouldn't believe us."

Chrystal swings her legs more furiously over the edge of the table, at the memory of it all.

"And do you know what? When we got off the make-up bit, they wouldn't give it back. I've been to the cop-shop loads of times, and they never give it back. And," Chrystal looks round for outraged support, "if they take your fingerprints, they don't destroy them, like they're supposed to. The copper said to me, 'Here you are, love, you can destroy them yourself, then you know it's done', and it was a photocopy. Of course it was, you could tell! Do they think we're thick or something?"

I really hope not, or the nation's policing is based on yet another highly inaccurate premise.

Here we are, two weeks in to the Law and You, discussing a little consumer law. What can you do if you buy something and you find that something is wrong with it? My mistake has been to assume that the goods had to be bought first!

"I took a dress back that I'd nicked. It had got a faulty zip, well, it had after I'd tried it on. It was one of them shops that automatically exchanges, or refunds your money. So I asked for the money back. My friend had bought one, so I used her receipt. It's easy! Making studies her finger-halls and winks. No one could argue that we're not all learning something in this class."

"Nick's fringe, come in! I do, but I wouldn't nick anything sentimental like, only fringe what's lying around that nobody wants." Dave is sporting a Union Jack tee-shirt and a mousey bloom over the top of his head. It is Dave, I am told, who

quietly removed 12 brass door knobs from the cupboard at the back of the room, while the local community policeman gave a talk at the front.

"Just for a laugh, like. I put 'em back later, but I could have got a few quid for that, you know." Break time arrives and I move cautiously along the corridor to my next group. The subject is benefits, and I am heavily armed with crisp handouts describing hypothetical cases of pregnant girls living with young men recovering from industrial accidents, who in turn, support three young children from a teenage marriage. My powers of imagination were stretched to create these tear-jerking little tales. I quickly wonder why I turned out so many brain-cells concocting them.

"I was chucked out at the week end, by my stepdad. Cox I'm pregnant. But it's all right, coz

'Dave quietly removed 12 brass door knobs while the local community policeman gave a talk'

"I'm going to live with Gary." Rita is blonde, a bit too cheerful, 16 going on 28.

"Gary's on a disability pension coz he was in a motorbike accident. He's only got one leg. It's OK tho'. He's still good in bed! Everyone falls about laughing."

"He's my brother, Gary is." Gaynor volunteers this information tentatively, as if she's stepping into territory recently conquered by Rita. "He's been a bit weird since the accident, sees a psychiatrist, and that doesn't help, Rita?"

"He's ever so excited about the baby, tho'. He got so drunk the night I told him about it, he smashed his fist through some bloke's wind-screen! He went to court, he's on probation, Rita, and the magistrate gave him community

service. He never noticed he'd only got one leg, and the probation officer never turned up to explain." She roars with wild, whooping laughter. I get a split-second vision of Munch's *The Scream*.

I try to steer us all back into the familiar burrow confines of the Social Security office, and what it might have to offer. As I take a deep breath and look purposefully at my pile of DHSS leaflets, Barry, a frail-looking Mod, cocooned in his Parka, whispers unemotionally, "My girl-friend's expecting. She don't know whether it's me or her old man."

"She should have an abortion then, Baz." Both turns kindly towards him, with total authority, before the rest of us have had time to think. "My mum helped me when I caught in the fifth year. Two days in hospital playing three card brag. It was all right."

"Me mum's going to take her to the doctor. She's 16 in two weeks, and Mum's going to let her come and live with us then." A private prayer goes out to Barry's mum. Barry goes back to writing something with black biro on the knee on his trousers. The DHSS leaflets hold as much interest as a pile of dead leaves.

I introduced Driving and Drink with some attractive, glossy leaflets and the lure of a video. A number of the lads pulled out their provisional licences and peered at the 'points' already accumulating, giggling a little uselessly. They talked of myths and legends built up around 14 Periods and the disintegration of the breathalyzer bag, with the kind of horror and excitement other generations spoke of Highwaymen.

The class on drugs, contrary perhaps to popular belief, developed little interest and displayed even less knowledge. Glue-sniffing probably doesn't lend itself to the same interest in types and prices as did marijuana years ago. The ones who have tried it, tell me plus makes them sick and they told out that heroin habit would be hard to

maintain on £27.30 a week. I admire their public relations exercise, and let the subject drop.

One week we talked about divorce. Another we spent on separation, custody and so on. Almost all the trainees had a tale to tell. Many of them had seen their parents shouting, weeping, hurling things about, over these very long. Step-parents had come, and in many cases, had been gone again. Months, if not years, had been spent following one parent, most commonly a mother, like flotsam bobbing around in a particularly violent wash, while she battled, struggled, screamed her way through the legal and bureaucratic process, to take or keep possession of the kids.

Now, many of these "kids" are a whisker away from repeating the pattern. Of course it's familiar, is their experience, the natural sequence of events, and expected by both family and friends. It is only us, with our middle-class blinkers and our strange burdens of particular values and notions, that feel things should be different for them, that life has dealt them a loser's hand.

But they can teach me as much as, if not more than, I can help them. In the long run, I feel their knowledge may be of considerably more use, can tell them how the law should be, and they can tell me how it is.

In their final class of this little course, Cheryl, pink-haired and talkative, unwittingly like a lot, and we all glimpsed the can of worms inside. "Why are we treated as 'lower' than other people? Lots of people get into trouble, do the things, but we get treated differently. As if we weren't as good as other people to start with."

"Right from first starting school, Cheryl, I mean, that happened to me," Cheryl says. "Just coz I was a good girl, and my dad threatened to send me to a boarding school. My teacher hardly spoke to me."

FEATURES

Eastenders

Henry Pluckrose visits a teacher training outpost specializing in urban deprivation



benefits too, according to Rob Poole, a field studies officer attached to the Field Studies Council in Shrewsbury and our "minder" for the day. The Badgers would be different people once they returned to school, he said. Even I would find life different when I got home. Buoyed up with the new hope that I would get that far, I was quite ready to believe him.

"They are also very good for group dynamics and cohesion, days like this," he went on. "See them on their own in the classroom and these people are experts. Out here it's not so simple. They've got to think of the group and ultimately convince other adults that they know what they are doing."

Strung out ahead of us in the rapidly worsening conditions, the Badgers were discovering that for themselves. Katrina's period as leader was over, but a disagreement had erupted between her and Jim who was assuming command. Was that the minibuses in the distance? Should they make straight for it or follow the planned route up over the next hill?

Roger Horsfield watched everything impassively. "Just as well all that's sorted out," he whispered confidentially as the group finally fell in behind Jim. "You see, they don't know it but they haven't really started yet. Later on they'll be practising rescue techniques. We've got two bodies hidden in the forest up there. They've got to organize a search, recover them and get them back to the van before they have their tea. Pity it's coming on to rain."

Only to shout at me for doing something wrong."

I can't hear anyone for the startling clamour to agree. "My teacher said to me, when I was seven, 'You could better yourself if you tried'. That's a bit much, isn't it? What did he mean anyway?" What, indeed? It seems sad, yet unavoidable, that the vast majority of teachers arrive from the kind of background which rarely has much in common with the kids they teach. We represent education and tedious books, "bettering oneself" and boredom. We might fool ourselves that because we've been students, experienced a few

'We represent education and tedious books "bettering oneself" and boredom'

things, maybe even had the odd brush with the law or ploughed through a divorce, that we understand, that we share certain beliefs, we can identify. But, in fact, it is an exceptional teacher who can successfully cross the cultural divide. And there aren't many of them about.

The Law and You was a good idea. We all practised an important social skill - listening, and they practised exploring their past. I couldn't help but keep thinking as we ranged about over this and that, that when the great Thatcher combine harvester razes the teaching profession to the ground, (and there's signs of the stubble burning even now), we should look to our students in further education, our fifth and sixth-formers in comprehensives, and the youngsters on YTS, for some real learning about the ways of the world. I've got my YTS kids whipped up into a frenzy of excitement. They're devising a course called, for want of a better title, Life Skills. They are going to teach me what they think I should know, and obviously don't. I wonder if Manpower Services always meant it to be taught this way round, but just forgot to tell us?

Nikki Foster is a part-time lecturer at Evesham College of FE.



Teaching practice: at Marner Primary School and at the Saxon Youth Club, Bow.



have come to appreciate that they do have something to offer the future teachers of their children.

Peter Andrews, head of Langdon Park Secondary School in Tower Hamlets, is convinced that unless teachers are alert to community attitudes, there is no way in which schools can give children the necessary skills to cope with the pressures of contemporary society. "Education is not just about getting a job. These children - often with underachievement stamped on them from the day they are born need to be given self-confidence as well as academic competence. We have to build their self-esteem."

In areas of urban deprivation teachers are difficult to find and to keep. But a high proportion of USC students return to teach in the area, often at the invitation of the schools in which they have taken their practice.

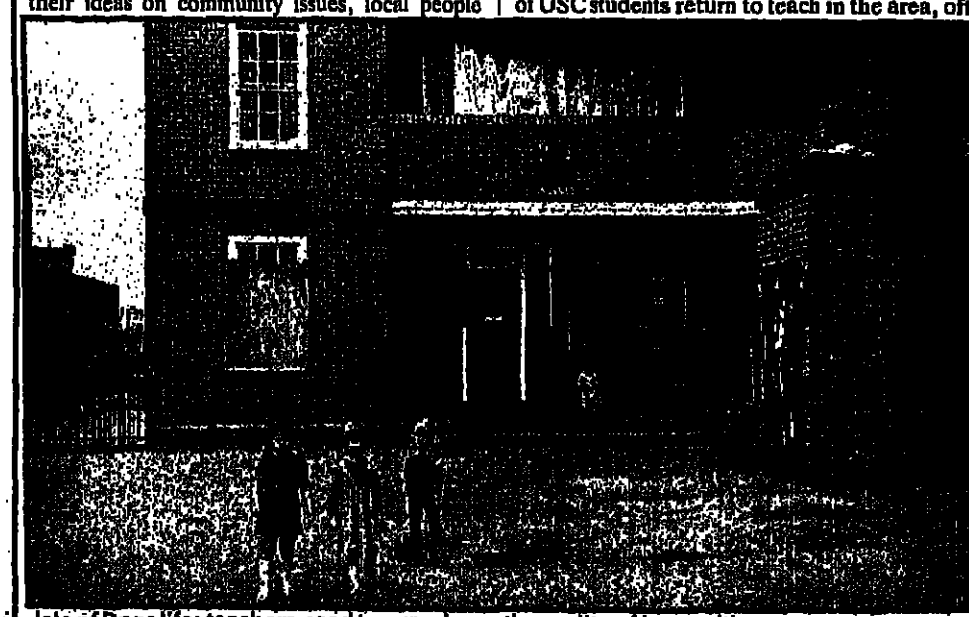
There are some who have reservations about the centre's work. Some teachers and social workers told me that concurrent placements meant that neither of the institutions involved in a student's training was able to develop professional techniques as fully as they might otherwise have done.

Roger Tingle believes that it is of paramount importance to bring the caring professions together, during some period of their training. A unified approach would not come about by legislation. It could, however, if all those concerned developed a common language and were helped to appreciate the role played by each specialist agency. Teachers must understand the difficulties faced by social workers; health workers must be helped to appreciate the demands and expectations placed upon teachers.

The student teachers were enthusiastic about the experience though Carolyn Johnson observed that, "on this sort of placement you can't afford to have a bad day". There was general agreement that the experience helped them come to terms with the rich variety of cultures which are hidden in our inner cities as well as to begin to understand the anxieties expressed by the white minorities who live in them. As Carolyn put it, "This is not so much a teaching practice as a learning experience for me".

The centre is now considering how to expand its work and has recently bought more property. This could mean developing new links with further education or embarking on more in-service inter-professional work.

Roger Tingle would like to hear from the one thousand students who have completed courses at the USC to establish their whereabouts and career patterns. Please write to The Director, USC, 76 Morpeth Street, London E2.



Life of Dogs life: teachers need to experience the reality of inner cities.



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Primary Education and Society

Stuart Marriott, University of Ulster

This book is an analysis of primary education in Britain today utilizing sociological perspectives. A range of empirical research is discussed providing both a picture of the current state of primary schooling, and also an assessment of sociological theories as applied to the education of young children.

1985 124pp 1 85000 070 0 Paper £ 6.95

British Community Primary Schools

Edited by John Rennie, Community Education Development Centre, Coventry

This book provides the first and only practical guide to primary schools becoming community schools by describing four already well established community primary schools in different parts of the UK.

1985 190pp 1 85000 091 3 Hard £13.95
1 85000 092 1 Paper £ 6.95

New Directions in Primary Education

Edited by Colin Richards, University of Leicester

... a useful addition to any primary school staffroom collection where members are seeking to further their professional qualifications. Briefing, Assistant Masters & Misses Assoc.

This book analyzes developments in primary education since 1974 and from this draws out issues which are gaining rapidly in currency and seem likely to have a significant impact on primary education in the next decades.

1982 310pp 0 905273 27 3 Hard £14.95
0 905273 26 5 Paper £ 7.95

The Enquiring Classroom: An Approach to Understanding Children's Learning

Stephen Rowland, Co-ordinator, Leicestershire Insights into Learning Project

"An invaluable book for primary teachers, but I hope too it is taken seriously by the research community." Curriculum Studies

By closely recording and reflecting upon the work and play of a group of 9-11 year-old children in a primary classroom, the author develops an approach to teaching and learning based upon the ways in which children are able to exercise a controlling influence over their learning activity.

1984 160pp 0 905273 99 0 Paper £16.95

Gifted Children and Teachers in the Primary School

Florence A Matlby, University of Sussex

"The text is firmly rooted in a sensitive awareness of the realities of primary schools and classrooms: teachers and children." Times Educational Supplement

This is the first study of its kind to examine children who are categorized by schools as gifted, and the process by which the categorization occurs.

1984 250pp 1 85000 003 4 Hard £13.95
1 85000 002 6 Paper £ 8.95

Design Technology: 5-12

Pat Williams, Primary Advisor, Berkshire LEA and David Jinks, British Schools Technology Project, Nottingham

Design Technology: 5-12 offers teachers, in readily understandable terms, sound educational arguments as to why craft, design and technology fit so naturally into the primary school curriculum. Case studies are included as well as practical instruction covering work undertaken across the whole primary age range.

Suppliers of information, tools and materials are also listed.

1985 130pp 1 85000 049 2 Paper £ 6.95

The Teaching of Primary Science: Policy and Practice

Edited by Colin Richards and Derek Holland, University of Leicester

"The book seeks to inform, and as such should provide a valuable resource for science educators." Resources Development Division, Liaison Committee on Educational Publishing

This book provides the first overview of developments in primary science prior to and following the national primary survey of 1978. Key issues central to contemporary policy and practice are identified, placed in context and shown to be interrelated making this essential reading for teachers, students and policy makers.

1983 288pp 0 905273 35 4 Hard £14.95
0 905273 34 6 Paper £ 7.95

Microcomputers and Children in the Primary School

Edited by Roy Garland, University of Exeter

... a useful and interesting book with plenty of stimulus and challenge. It ought to be on the bookshelf of every primary school headteacher. Educational Review

1982 222pp 0 905273 33 8 Hard £14.95
0 905273 32 X Paper £ 7.95

Gymnastics 7-11: A Lesson-by-Lesson Approach

M E Carroll, Brighton Polytechnic and D R Garner, East Sussex Education Authority

This work book, designed for teachers and those in initial training, adopts a lesson-by-lesson approach to the teaching of gymnastics for the 7-11 age range. Based on the most important components and characteristics of gymnastics, each stage is clearly structured over a four-year span with appropriate teaching strategies and child learning requirements.

1984 185pp 0 905273 43 5 Paper £ 6.95

What Future for Secondary Schools?

John Sayer, formerly Principal, Banbury School, Oxfordshire

This book is important for all those concerned about the future of secondary schooling. It analyzes and illustrates the results of a rapidly changing society on the state of secondary education today. The author argues that with no clear idea of the purposes and priorities for schools beyond primary education we are left with a system which weakens morale by continuing to harbour unrealistic expectations and kind resources. Looking at the political and social issues, aims, current debates and the pressures of short term utility the author's conclusion is to offer a

new revolutionary form of post-primary education with particular emphasis on life-long learning in local communities.

1985 188pp 1 85000 071 9 Hard £13.95
1 85000 072 7 Paper £ 6.95

Comprehensive Schooling: A Reader

Edited by Stephen J Ball, University of Sussex

"... a readable and interesting book." Journal of Education for Teaching

The book consists of a series of case-studies of comprehensive schools. Each chapter addresses a particular issue or problem currently being confronted in schools.

1984 220pp 0 905273 90 7 Hard £16.95
0 905273 89 3 Paper £ 8.45

Initial Encounters in the Secondary School

John Beynon, Polytechnic of Wales

This book is an ethnography of initial and often combative encounters between teachers and pupils during their first month together in Lower School. It examines the socialization of the latter into secondary schooling (in this case an 11-18 comprehensive in South Wales) and inductive strategies used by teachers and pupils to cope with starting term. It thus presents the reader with a vivid picture of the complex processes and pressures of life in today's classroom.

1985 250pp 1 85000 031 X Hard £14.95
1 85000 032 8 Paper £ 7.95

European Dimensions and Secondary School Curriculum

Ivor F Goodson and Veronica McGinney, University of Sussex

In the UK secondary school children receive no specific teaching about Europe and their knowledge is mainly distilled from history, geography and modern languages which only a minority take and which often stress imperial or isolationist factors. The object of the research on which this report has been based is to see how this situation can be rectified.

1985 208pp 1 85000 045 X Hard £14.95
1 85000 046 8 Paper £ 7.95

The Physical Education Curriculum in the Secondary School: Planning and Implementation

Gordon L Underwood, Nottingham College, Dover

This book investigates the ways in which secondary school teachers plan and implement their physical education curriculum. Based on empirical research, it illuminates dilemmas facing many physical education teachers and offers practical advice.

1983 190pp 0 905273 48 6 Hard £13.95
0 905273 47 8 Paper £ 6.95

The Sixth: An Essay in Education and Democracy

William Reid, University of Birmingham and Jane Filby, University of Aston in Birmingham

This book traces the tradition of the sixth form from its origins in the public schools of the nineteenth century through to current controversies over sixth form and tertiary colleges and the extension of 16-19 education to embrace youth opportunities programmes and other semi-vocational courses.

1982 275pp 0 905273 29 X Paper £ 7.95

Higher Education for All?

Edited by Gordon Roderick, University of Sheffield and Michael Stephens, University of Nottingham

A collection of papers by authors from a wide variety of backgrounds applying their expertise to a question which draws out very different assumptions, commitments and postures.

1979 205pp 0 905273 10 9 Hard £11.00

Maladjusted Schooling: Deviance, Social Control and Individuality in Secondary Schooling

John F Schostak, Centre for Applied Research in Education, University of East Anglia

This book identifies the main theories of social control, deviance and individuality and how they interrelate. It analyzes the pressures which inhibit individuality and looks at strategies which might facilitate it in the context of a community suffering high levels of unemployment and associated social problems, including racism and sexism.

1983 235pp 0 905273 13 8 Hard £14.95
0 905273 12 0 Paper £ 7.95

Pupil Power: Deviance and Gender in School

Lynn Davies, University of Birmingham

"... anyone interested in classroom interaction will find this book valuable for its insight and its detail." British Journal of Sociology of Education

This book highlights the gender difference in pupil deviance and maintains that such a difference can be a prime clue in the investigation of pupil responses to schooling. The author's interest is two-fold: it provides comprehensive explanations of pupil deviance and also to suggest inferences for action.

1984 179pp 1 84900 107 7 Hard £14.95
1 84900 106 9 Paper £ 8.50

PRIVATE SCHOOLING

Clive Griggs, Brighton Polytechnic

For some, private education appears as a traditional element providing the best education available; for others it is seen as privileged schooling for the wealthy and an anachronism in a democratic society. This study seeks out to examine which of these two competing and conflicting views comes nearest to the truth.

1985 220pp 1 85000 073 31 Hard £14.95
1 85000 074 3 Paper £ 7.95

Power and Policy in Education: The Case of Independent Schooling

Urian Gellner, University of Surrey and Ted Tanner, University of Sussex

The central theme of this book is to examine the recent political history of private schooling. It is the popular view that the British educational system is a state of crisis primarily due to cuts in resources, and continual attacks on modes of practice. However, this is true only of the maintained sector: private schooling by comparison has prospered. Just how this transition in fortunes has been accomplished is described in the book.

1985 260pp 1 85000 062 X Hard £18.95
1 85000 063 8 Paper £ 6.95

British Public Schools: Policy and Practice

Edited by Geoffrey Wallard, University of Aston in Birmingham

"This collection is stimulating, well written... its analyses are informed by a sophisticated understanding of the complex relation of education to society." Times Higher Education Supplement

This book gives the most up-to-date and comprehensive work on research and developments in Britain in the field of health education and youth. Almost every important project undertaken in recent years is represented.

1984 460pp 0 905273 54 0 Hard £18.50
0 905273 53 2 Paper £12.95

The Rise of the English Prep School

Donald Leinster-Mackay, University of Western Australia

"... We have waited until now for a serious scholarly reconstruction from wide-ranging sources. Much valuable and painstaking research went into the making of this book." Times Educational Supplement

This book is the first general history of the English

preparatory school. Its main concern is to show how two types of English school with largely different beginnings, the one based on private enterprise, the other mainly, but by no means exclusively, on philanthropy, came to be complementary parts of what is now known as 'the English Public School system'.

1984 365pp 0 905273 74 5 Hard £18.50

YOUTH, TRAINING AND CAREERS EDUCATION

Edited by Rob Fiddy, Centre for Applied Research in Education, University of East Anglia

This book brings together twelve perspectives of policy and experience concerning threatened or high levels of youth unemployment and the measures taken from ten separate countries.

1985 234pp 0 905273 86 9 Hard £14.95
0 905273 85 0 Paper £ 7.95

The Youth Training Scheme: A New Curriculum: Episode 1

Terry A Edwards, City of Bath Technical College

This book is the first serious attempt to grapple with the curricular implications of the Youth Training Scheme and with the questions arising from the organization, administration and manpower policy objectives of the scheme.

1984 195pp 0 905273 96 6 Hard £10.95
0 905273 95 8 Paper £ 6.95

In Place of Work: Policy and Provision for the Young Unemployed

Edited by Rob Fiddy, Centre for Applied Research in Education, University of East Anglia

This essentially practical book seeks to promote an understanding of policy and practice in relation to provision for the young unemployed. It does this through a series of research-based papers which bring together policy analyses and the experiences and opinions of the young people concerned, expressed in their own words. This book is a must for all those involved with the 14-19 year olds.

1983 193pp 0 905273 46 X Hard £13.95
0 905273 45 1 Paper £ 6.95

Rethinking Transition: Educational Innovation and the Transition to Adult Life

Edited by Carol Varlam, Goldsmiths' College, University of London

This volume comprises papers based on the evaluation of a group of projects concerned with the problems faced by young people in transition from school to working life. The projects were funded by the European Economic Commission, the Department of Education and Science and various education authorities in England and Wales.

1984 150pp 0 905273 68 0 Hard £11.95
0 905273 67 2 Paper £ 6.25

Careers Counselling in Practice

Ben Ball, Brighton Polytechnic

This book is intended as a practical guide and a review of developments in career work. It surveys careers counselling and guidance practised in schools, colleges and universities as well as work done outside the educational field by vocational guidance agencies. No other recent book covers the same content area and range.

1984 175pp 0 905273 70 2 Hard £11.95
0 905273 69 2 Paper £ 6.50

EDUCATION AND WELFARE

Edited by George Campbell, University of Southampton

This book is a detailed study of the ways of harmonizing school and community policies, strategies and methods in health education, with examples of work achieved in most countries of Western Europe and the United States.

1985 232pp 0 905273 58 3 Paper £14.95
0 905273 57 5 Paper £ 7.95

Health Education and Youth: A Review of Research and Developments

Edited by George F Campbell, University of Southampton

"... is a mine of highly relevant information for those involved in health education and/or health promotion and should be on the shelves of teaching establishments and individual professional workers." Journal of the Institute of Health Education

This book gives the most up-to-date and comprehensive work on research and developments in Britain in the field of health education and youth. Almost every important project undertaken in recent years is represented.

1984 460pp 0 905273 54 0 Hard £18.50
0 905273 53 2 Paper £12.95

Schooling and Welfare

Edited by Peter Ribbins, University of Birmingham

The welfare dimensions of schooling is the concern of this book. This is a topic which has been both the subject of growing debate and the source of some

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THE GROWING EDUCATION PUBLISHER

comparative, sociological and psychological from which to view the subject.

1984 275pp 0 90527 78 8 Hard £12.95
0 905273 77 X Paper £ 7.50

Education and Social Class

Edited by Rick Rogers, Freelance Journalist

This book is of central importance to the debate on the direction of comprehensive education and the achievement of equal opportunity for all young people. Important issues such as the differential gap between the social classes in school achievement, the gaining of qualifications, and subsequent chances of employment are discussed in depth.

1985 206pp 1 85000 094 8 Hard £14.95
1 85000 095 6 Paper £ 7.95

Class Ideologies and Educational Futures

David W Livingstone, Ontario Institute for Studies in Education

This book makes a number of original contributions to the study of relations between education and society in general.

1983 251pp 0 905273 40 0 Hard £14.95
0 905273 39 7 Paper £ 7.95

Marxism/Structuralism/Education: Theoretical Developments in the Sociology of Education

Madam Sarup, Goldsmiths' College, University of London

This interdisciplinary textbook provides an introduction to the many theoretical developments and controversies now taking place in the sociology and politics of education.

1983 194pp 0 905273 56 7 Hard £13.95
0 905273 55 9 Paper £ 6.95

Ideology, Culture and the Process of Schooling

Henry A Graux, Boston University, Massachusetts

"... this collection provides an excellent critical overview of recent Marxist theory as applied to schooling." Education

This book consists of a number of essays that draw heavily upon theoretical insights associated with the critical tradition of western Marxism as well as some recent variants of radical educational theory.

1981 168pp 0 905273 19 2 Hard £ 8.95

Schooling Ideology and the Curriculum

Edited by Len Barton, Westhill College, Birmingham

This is an edited series of papers from the 1980 Westhill Conference. It explores the ways in which the notions of the relations between theory and practice, and between belief and action, can be used to develop sensitivity in the sociology of education.

1981 207pp 0 905273 13 3 Hard £14.95
0 905273 12 5 Paper £ 7.95

Society, State and Schooling

Edited by Michael Young, University of London

This book focuses on the research process in studying a variety of educational settings: schools, classrooms and curriculum.

1984 275pp 0 905273 92 3 Hard £14.00
0 905273 91 5 Paper £ 7.95

Strategies of Educational Research: Qualitative Methods

Edited by Robert G Burgess, University of Warwick

This collection of essays focus directly on the strategies and tactics that have been used by social and education researchers to collect data using a range of qualitative methods thereby filling a gap in literature on the discussion of research methodology.

1985 336pp 1 85000 033 6 Hard £16.95
1 85000 034 4 Paper £ 9.95

Becoming Critical: Education, Knowledge and Action Research

Wilfred Carr, College of North Wales and Stephen Kemmis, Deakin University

This book emerged from the authors' sense of common purpose and shared commitment and concerns. These are: a dissatisfaction with the way in which educational research is increasingly becoming divorced from its philosophical and historical roots; the relationship between educational theory and practice can no longer be vindicated; and also a commitment to the development of forms of enquiry in which educational research and the development of teachers can be more readily integrated.

1986 240pp 1 85000 089 1 Hard £14.95
1 85000 090 5 Paper £ 7.95

Paradigm and Ideology in Educational Research: The Social Function of the Intellectual

Thomas Popkewitz, University of Wisconsin-Madison

The purpose of this book is to explore the contradictions of social science. It probes into how social assumptions, cultural location and political interests become intricately tied to conceptual, procedural and design questions.

1984 208pp 0 905273

BOOKS

lingo

Presently

"Presently" used to be a very useful word. It referred to some unspecified time in the near future, implying no great delay, but avoiding the absolute commitment given by promises of "in half an hour" or "this afternoon".

"Presently" was also a very helpful English equivalent to keep in mind for translating the Latin word *mox*, which I learned as meaning "soon", or "presently", or even "by and by".

But in recent times a new, additional meaning of "presently" has appeared on the scene. No longer does it have the sole meaning "soon". It has acquired the further possible meaning of "now".

This other meaning is disconcerting for those who still think of "presently" as referring to future time. "The committee meeting presently is the ABC committee". Is the committee to be in session soon, or is it actually meeting now?

It seems regrettable that "presently" should be thus press-ganged into doing two tasks, and possibly causing some confusion in the process.

It is especially regrettable when there is already the perfectly good "at present" to carry out the new duty imposed on "presently".

That is all I have to say at present. I may have more to say presently.

Bridget Loney

I read the recent *Lingo on smidgen* (TES, October 11) with astonishment at Mr Ted Wragg's extraordinary (and preposterous) search for a dictionary entry for the apparently elusive *smidgen*.

But only apparently - not only is the word included in Collins English Dictionary and Collins Concise English Dictionary but it is also in the current editions of the Concise Oxford and Pocket Oxford dictionaries, the Chambers Twentieth Century Concise Twentieth Century Concise English and Concise English Concise English dictionaries, and, since it is American in origin, in all the standard American dictionaries, including the large Webster Third International and the Webster Collegiate. What more can lexicographers do for the Wraggs of this world, if they will not replace their old dictionaries?

Footnote for etymologists: Mr Wragg quotes the cryptic remark in the COED: "etymology key to this puzzle is that smoke stains and smudge came to mean a sooty mark, a *smut* or *smudge* (both ultimately from the same root as *smith* or *smith*). The link sense is *spot*, which doubles as "mark" and "small amount".

W T McLeod

Robert Latham's definitive edition of Samuel Pepys' diary has now been abridged into *The Shorter Pepys* (Bell and Hyman £20.00), a beautifully produced volume with introduction, chronology, glossary and index, as well as maps and family trees: it has been edited so as to form a continuous narrative.

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The Moulin Rouge, Paris

Going to town

Cities and People: A Social and Architectural History. By Mark Girouard. Yale £16.95. 0 300 03502 0.

In Amsterdam, the first totally commercial city, 17th century beggars were set to work in the city rasp-house, rasping white Gironard calls hazelwood (actually brazilwood) to make a red cloth dye. The word "slave" comes from Slav, because in medieval Constantinople the ones were the other. Roaming pigs were not banned from Manhattan streets until 1867. These are three of the many nuggets in this kaleidoscope of information. Too many, perhaps, at the expense of a sense of direction, and some like Maximilian's grudge against Bruges appear twice. The early chapters, on (for example) Byzantium, Bruges, Florence, Rome and Venice, are easy enough, and we get a real sense of what they were once like. But as the city-hopping speeds up and jet-sets in, it

is difficult in the later chapters to remember where we are. Handsomely illustrated, this book looks like, but is not, one of those "accompanying books" published with television documentary series; there are inevitable and involuntary resonances with John Robert's *Triumph of the West*. After all, "civilization" means coming to live in cities, becoming civil from barbarian. (Similarly, "politic" and also "police" come from the Greek word for a city, in the same sense of people rather than buildings; "police" on the other hand has to do with a polished appearance.)

"I want to find out," Girouard writes, "not just who designed the buildings and when they were built, but why they were built", but his canvas is too wide for many questions to be asked or answered. The short answer to why they were built is surely trade. So many cities of his choice are ports. Cities are consumers, of food, fuel, transport, building. They depend on production, monopolies, natural

advantages like harbours or river crossings, or services like banking. They exact a price, on citizens and outsiders, whether in taxes or restrictions on freedom. Cities always seem full of foreigners, and it is a good but unasked question how far they conform to their alien habitat.

"The variety of medieval trade," says Girouard, "is endlessly fascinating" but it is also important that on the whole people then sold what they had or could produce, instead of trying as the modern world does to sell cut-price goods to Newcastle. One of the recurrent themes is wool, and it is tempting to suppose that there were more sheep in medieval Europe than in modern New Zealand.

By omitting the Greeks and Romans, Girouard cuts out the origins of the western city which, rather than all cities, is his subject. One of Elliot's characters says "I'm glad I'm not people"; it is the joy and the sorrow of people in cities that they are mused and anonymous. There must have

been lonely souls in Periclean Athens, but it was compact enough for everyone to be known and for the myth to grow up that as an organism Athens actually worked.

So too medieval Florence and Siena worked, building their great cathedrals as the figureheads of civic rivalry. The Florentines got their finished when Brunelleschi showed them how, but half of Siena's remains a roofless monument to boundless pride and the Black Death. Yet as a city Siena seems denser, harder, taller and more urban than Florence.

Until about 1800 no city was too big to take in from one viewpoint; after that the trouble really begins and the book changes gear. The Industrial Revolution changed the urban face, and Manchester is used to exemplify the new city of dark Satanic mills, partly through the crocodile eye of Engels. I cannot help feeling that if much smaller. After the industrial city comes the backlash: now cities and especially their planners have a bad name with the public. As they grow bigger, mistakes rather than successes become catastrophic. The New Jerusalem is weighed against the New Babylon, and either may include both Los Angeles, the ultimate bungalow town, and any high-rise suburb one cares to name.

It is in suburbs that the city concept leaks away. When Lord Mayors stopped living over the shop they had to have mansion houses. The prevailing wind led the Victorian wealthy to settle south-west of British cities, and as offices replaced inner city dwellings the less prosperous had to commute from the east. But for all his own claims to city life, Girouard's Nottingham Hill is also a Victorian suburb, a way (as he writes, but of St John's Wood) "trying to get the best of both worlds".

Not everything in this review is in *Cities and People*, and to find out what is not you will have to read it with care. Some things are not explained, for example that what was actually sold in the Turkish market was slabs of meat. A pulitzer is usually a well-to-do family house rather than a place. "Aquila Virgo" is polyglot; to designate is still to spare nine-tenths. Having been bred in one, I am not sure that semi-detached houses are so rare in the United States. This is a book of anecdotes, not of questions and answers - why do we live in cities anyway? But then, as Robert Louis Stevenson said, to travel hopefully is better than to arrive.

Kerry Downes

Into the unknown

And the Violins Stopped Playing. By Alexander Ramati. Hodder & Stoughton £8.95. 0 340 36687 7.

An Outstretched Arm. By Theodore Norman. Routledge & Kegan Paul £15. 0 7102 023 9.

The Kenya Pioneers. By Errol Trzebielski. Heinemann £12.95. 434 79502 X.

The literature of journeys has always had a strong metaphysical component involving search and discovery whether the object was the Promised Land, the Holy Grail, or the New World. Each of these books is an account of trekking from the known to the unknown, both literally and metaphorically. *And the Violins Stopped Playing* related the previously untold story of the gypsy holocaust, part of Hitler's "Final Solution". It took place between November 1942 and January 1945, resulting in an estimated 300,000 deaths. The motive was not racial but social: gypsies, being nomads, were also presumed to be "thieves, criminals and parasites".

Alexander Ramati had already decided to write a book on the subject when he met Roman Mirga and was given all his wartime notes. Laying aside whatever he might otherwise have written, Ramati decided to tell Mirga's own story as a first person narrative that could almost be a novel but is actually an extraordinarily gripping "ghost-written" memoir. It details the persecution and destruction of the Lowland Gypsies of Great Britain, and in particular the Mirga family who had been living as safe musicians in Warsaw. Once the alarm was raised they and their tribe set out for Hungary

and safety. After many graphically described hazards they arrived, assisted by the Lowland tribe, resettled themselves; but after a year pressed on, only to meet a Nazi column at the Austrian border and to find themselves transported to Auschwitz with a Jewish convoy. Though better treated than the Jews, their decline and demise were inevitable. Mirga, in his late teens, was put to work as a translator in Dr Mengele's office and saw the full horrors of his "medical research". While the Jews were gassed, the gypsies were systematically infected with fatal diseases. Mirga lost all his family and nearly all his tribe. Apart from the intrinsic value of the account, there is much fascinating information about Romany life, lore and customs in this book.

An Outstretched Arm: A History of the Jewish Colonisation Association is the history of a charity founded in 1891 by wealthy philanthropist Baron de Hirsch "for the resettlement of Jews on the land, and their relief in other ways from poverty, persecution and misery". The result was planned migration on a large scale, initially of Russian and East European Jews, then those from Germany.

Contending against the old system of almsgiving, Hirsch tried to make those he helped self-supporting, often by repayable loans. Land was purchased and farms set up, then commercial enterprises and trade schools. Some of the results were impressive, though the ideology behind it was mixed. The popular Jewish "productivist" movement believed that producing an artifact instead of money-lending would lessen anti-Semitism. The security of this policy was not fully realised until the Second World

War, during which, the book euphemistically states, "more Jews were lost than successfully escaped from Europe".

Packed with data, charts, photographs and maps, this book is encyclopedic in scope and likely to remain the definitive work on the subject. The "story of the JCA can be regarded as a wild, romantic adventure without precedent," the author states. Unfortunately, it does not read as one.

The Kenya Pioneers is a more exciting read, charting the three radical changes in Kenya: from Protectorate, to Crown Colony, and finally Independence, and the lives of those who were inextricably linked with these events. The pioneers were, apart from the missionaries, "the restless, the enterprising, the unfortunate, the ambitious, the damned and the discontented". These Europeans under the spell of Africa crossed deserts on mules, quelled the Maasi and the Nandi, survived dysentery, malaria and drought, founded trading companies, hotels and clubs, learned Swahili, and sent their children "home" to be educated. They made soap out of Zebra fat, and furniture from packing cases; bought land on a 99 year lease at a penny per acre per annum. Fortunes were made and lost in coffee, flour, wheat crops and sheep. They soon found that "There is nothing like deprivation to quicken a lost sense of appreciation for the simplest of pleasures". Whatever their motives, their achievements and courage were considerable. The author makes excellent use of contemporary material such as letters, unpublished diaries, newspapers and government reports.

Richard Ormrod

PAPER BACKS

A Japanese Mirror. By Ian Brown (Penguin £3.95) is a paperback edition of a survey of Japanese culture and art, first published last year. Ranging from the Gods to comic strips and drawing much of its evidence from popular literature and film, it explores the significance of *makoto* ("sincerity", "purity of heart"), the conflict between *giri* ("honour" or "duty") and *ninjo* ("humanity"), the relationship between *internae* (the public facade) and *honne* (private feelings).

The essence of the *haiku* is *kare* or "lightness of touch". On Love and Barley (Penguin £2.50) contains 253 *haiku* of the 17th-century poet Basho, translated by Lucien Stryk. An introduction puts the poems into the context of Zen Buddhism and there are appropriately spare illustrations from paintings by Taiga. Stryk's notes are equally spare, some almost *haiku* themselves.

Poet: On my knees, hugging people, I grieve for priest Tando. Note: Nothing is known of the poet's friend priest Tando. David Hawkes' translations of the Songs of the South (Penguin £4.95) are at the other extreme. The group of poems has an introduction and a copious notes to the translations and a general introduction gives the background to this anthology from 2nd-century China. The scholarly *Songs of the South* or the Implicity of *haiku* : two routes to the east.

Robin Bush

Pacific Basin Books have just published, at £7.95 each, Pierre Loti's *Madame Chrysanthemum* (which inspired Puccini's opera) and *Jidoy's Home* (a life in Tokyo).

Caught in the act

40 years is a fair age for an education act; Balfour's achieved it, and so has Butler's, perhaps surprising for an act passed by a coalition government in wartime. The authors of *Educational Time for a New Act* (by Richard Aldrich and Patricia Leighton, Bedford Way Papers, £2.50, 085473 217 9) believe that the time has come to replace it. The problem is not the organizational framework set up in the act, based on a partnership between central and local government, but the lack of precision in spelling out the powers and duties of each, and the relationship between them. The courts have defined and interpreted where cases under the act have come before them, but there are some areas never tested in this way, and others, for instance the curriculum, about which the act says nothing at all. With central government showing increasing interest in the area, and the idea of the common core curriculum gaining currency, responsibilities - and the fate of the school tradition - right to decide what they teach - need to be established by statute. Increasing government control of local spending is bringing the right of l.e.s.s. to make decisions about educational needs in doubt as well. What's more, some provisions of the act were never implemented anyway, notably full-time provision for the 16 to 19 age-group in further education, and in most parts of the country, nursery education too.

Ian Mills in *How to Achieve Quality in Education* (Anchor, £7.95, 0948016 035) is more concerned with operating within the existing framework than changing the act. He argues for education which will lead to "quality in life", which he takes to mean freedom from material restraints, the opportunity to utilize potential, to strive and to relax, and to acquire both a sense of belonging and a sense of purpose. He believes the school and the community must work together to achieve this, and emphasizes the importance of constant evaluation of aims and methods, so as to keep on course. His conflation of evaluation and value judgements seems a bit suspect though; we all believe in evaluation, his argument seems to run, therefore value judgements, which are the foundation of moral education, should be beyond criticism, too. He fails to ask whose value judgements they should be, or who evaluates the values.

This must be where the concept of leadership in education comes in. Leadership can come from the DES and HMI at the centre, from education officers and advisers locally, and from specialized bodies such as the Schools Council and the Council for Educational Technology, and of course from

within the schools themselves, where classroom teachers as well as heads and managerial teachers can be leaders. Teachers' centres and advisory teachers are becoming increasingly important in leadership. INSET is a major development area, and parents too in some areas are playing a growing part in providing initiatives. New Directions in Educational Leadership (edited by Paul Harling, Palmer £19.50, 0905273 605, £12.95, 0905273 59 1) surveys this diversity of leadership and its aims, and the changing relationships between the various participants.

Conducting Small-scale Investigations in Educational Management (by Judith Bell et al. Harper and Row £7.50, 006 318293 9) and Case Studies in Educational Management (by Sandy Goulding et al. Harper and Row £7.25, 006 318294) are set readers for the Open University course "Applied Studies in Educational Management". The first describes the different research methods available for conducting small-scale investigations in a school, the relative merits of interviews, questionnaires, observation, and case studies, and the use of existing data such as school records. There are guidelines for determining the focus of your research and for deciding what to make of it all once you've done it. The advice is helpful and practical; perhaps the most encouraging piece is "the best way of learning how to conduct a piece of

research is to do it". The companion volume describes case studies, and deals with all kinds of small-scale research projects in areas from a school's relationships with outside bodies such as parents and employers, to curriculum innovation and the management of staff and resources.

Caring for Secondary School Pupils (by Leonard Davis. Heinemann Educational £6.95, 0 435 80272 0) is a case study in itself, based on a five-year study of the progress and personal development of about 800 pupils in three comprehensive schools. The research was based on both confidential record files (including attendance records, internal reports and reports for parents), and individual interviews with the pupils. It was the latter which were most revealing in identifying problems and needs; there seems to have been a strikingly responsive reaction to this demonstration that someone was interested and had time to listen. All kinds of concerns and tensions emerged - worry about exams and jobs, about families, about race, sex and morality, and attitudes to teachers and the school. There are important implications here for the provision and practice of pastoral care. You sometimes hear teachers maintain that they're not prepared to act as social workers. Mr Davis's challenge is to say, why not? That's just what they're needed to be.

Jessica Saraga

Contradictions, confusions

Arcaida For All. By Dennis Hardy and Collin Ward. Mansell Publishing Ltd, £25.00. 0 7201 1679 1. £9.95. 1743 7.

The Breunham Trilogy. By John Moore. Oxford University Press £4.95. 0 19 281857 0.

Rural or coastal slums - or Arcaida for the masses? Happy early 20th-century developments - or highlights on the landscape? Entertaining socialism - or merely the continuing growth of property-seeking anarchism? The contradictions and confusions highlighted in *Arcaida For All* make fascinating and, for a society presently seeking solutions to new concepts of leisure and the relationship between people and the use of space, compelling reading.

This social history of the "Pitlands" and their very real people puts Canvey Island, Penzance, Pinner and similar working class slums firmly into the context of the Twenties and Thirties - and today. Priestley, writing at that time, thought "England was fast becoming a land without privilege, where

suddenly everything was becoming accessible to all". Just as the more affluent today are purchasing time shares in the Algarve (and what are they doing to the oppressed masses (oppressed, that is, by the lack of space) in the East End of London and similar environs elsewhere purchase plots of land - and old railway carriages which they then renovated and used for weekend retreats.

Hardy and Ward's study illustrates by word and nostalgic picture how these "eyesores" soon developed into holiday and, finally, permanent settlements. The battles with bureaucrats, slightly anxious to protect the countryside (or whom?), the effects of legislation, the manoeuvres of entrepreneurs and the common people alike provide lessons which must be as relevant to today's search for *liebensraum* as they were 60 years ago.

For those with a memory and love of the English village as it was - and, if you look for it, still is - the appearance of *The Breunham Trilogy* in paperback must give real pleasure. Here indeed, on the printed page, is a *liebensraum* in

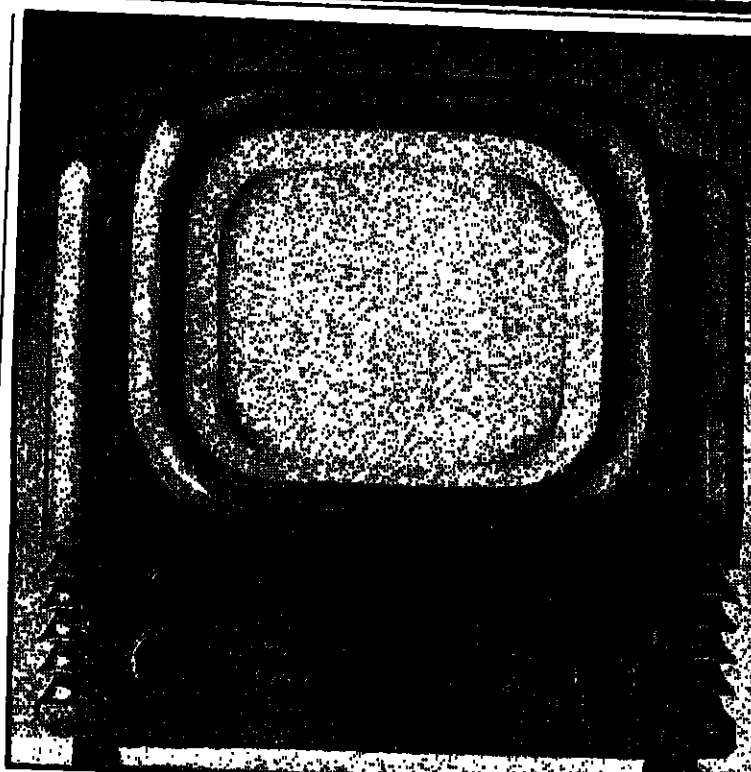
which to escape the rigours and pressures of today and lose oneself in the pastoral of Moore's beloved Elmhurst.

Here is part of the real old England of the Thirties, with all its countryside calm, yet alive with the machinations, unforced humour and vitality of common folk, landed gentry, shabby-coated professionals and English eccentrics, fighting, and joining hands, across the boundaries of class.

Here, not so strangely, are the foundations on which our present society was built. Breunham was once a secure corner of England, but changed in step with the rest of the country when hit by the depression; war, unemployment and slum clearance. It was affected, too, by members of its own cast; the fox hunters and the motor-cyclists, the "fallible council-lover" and the independently minded and respected school teacher. Everything and everyone is described with a rare but loving clarity. Salutory reading, indeed.

Joe Benjamin

BOOKS



Classic Plastics, by Sylvia Katz (Thames and Hudson \$6.95) manages to be both a manual for connoisseurs and a concise history for those as yet uninitiated into the prosaic. Did you know that horn was a natural plastic, heated, moulded and introduced into shape by proto-technologists centuries ago? Ms Katz's short amber, tortoiseshell and gutta percha served their turn before Leo Bakeland and guide (including feel and smell tests for identification purposes), debunk myths of progress: Eighties designers have no monopoly on brilliant ideas. Above: Bush Radio table television. Phenolic, 1949.

Michael Church

within the schools themselves, where classroom teachers as well as heads and managerial teachers can be leaders. Teachers' centres and advisory teachers are becoming increasingly important in leadership. INSET is a major development area, and parents too in some areas are playing a growing part in providing initiatives. New Directions in Educational Leadership (edited by Paul Harling, Palmer £19.50, 0905273 605, £12.95, 0905273 59 1) surveys this diversity of leadership and its aims, and the changing relationships between the various participants.

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Rodney Peppé and Eric Hill are two tested favourites whose every endeavour goes down well. Though parents and readers may tire of Rodney Peppé's Block Books for Methuen (£1.95 each), their boxed and sturdy format is as successful as the simple information on Animals, Colours, People and Numbers. Spot at the Farm, Spot at the Fair and Play with Spot

CHILDREN'S LITERATURE

Young ones

Is there no end to Rod Campbell's powers of invention? After lift-the-flap and stroke-the-fur, *Misty's Mischief* (Viking Kestrel £5.95) follows a fluffy cat through the misadventures of her day: verbs emphasized in bold type for beginning readers, and silky coat hidden under a flap at the last for the very small. Even more inventive, *Playwheels* (Blackie £4.95) not only has the real red wheels of last year's book, so that the book can be run along like a car, but also has moving parts of card, so that the digger, dumper, tipper and bulldozer can be made to "work". An all-time favourite, and not likely to fall to pieces too soon.

Not all inventions are so happy. Candy Cottage and 1, Sunny Street are boards in the shape of charming dwellings with leaflet stories by Renate Kozikowski inset (Methuen £3.50 each). Though this artist's work is always delightful, the storylines are too slight and the leaflets too difficult for even adults to manipulate, while children rip them straight out. The idea of situating stories in the rooms in which they take place is attractive but would be more suitable for older children.

Methuen Cut-Out Board Books have added two titles, *This is our Town* and *Seaside Holiday* (£3.95 each) to their glossy range. I find these bland and uninspiring, but children like the intricacy of the unfolding cut-out vistas. Even less productive are a new series of Blackie Dressing-Up Concertinas (Blackie £1.50 each) by Des Marwood. Billy Bear, Peter Pupper, Katie Kitten and Mary Mouse are dressed in little creatures whose variations in costume are not made more interesting by appearing in books with cardboard head-shapes on top. The best that can be said for Matthew Price and Jean Claverie's Peekaboo (Walker Books £4.95), a red-headed extravaganza of personages popping out from bedclothes and cupboards, is that it is too impractical to be frightening, though adults might enjoy its big-eyed spookiness.

Equally for adults is *My First Book* by Collin and Jacqui Hawkins (Viking Kestrel £5.95), which is a lift-the-flap book in Campbell's style in which to record those "important firsts" of Baby's life (including first party hat). Rodney Peppé and Eric Hill are two tested favourites whose every endeavour goes down well. Though parents and readers may tire of Rodney Peppé's Block Books for Methuen (£1.95 each), their boxed and sturdy format is as successful as the simple information on Animals, Colours, People and Numbers. Spot at the Farm, Spot at the Fair and Play with Spot

Finally, Camilla Jessel has done some photo board books for Methuen under the rubric *Babydays* (£1.50 each). In *Baby's Toys* and *Baby's Day* toddlers can see their activities suitably mirrored in faces from different races, though the pictures are rather complex for absolute beginners.

Victoria Neumark

Authority in Language

A Study of Language Standardisation and Prescription
JAMES MILROY and LESLEY MILROY

This important and controversial text examines ideas on Language expressed by writers from Swift to Orwell, tracing them to present-day views on correctness. The idea of a standard language affects a wide range of practical issues, such as language policy in developing countries, and nearer to home, education and therapeutic practice. The authors emphasise the variation that exists in spoken English and its social implications, arguing that language ability could be more accurately assessed with attention to speakers' total communicative competence.

0710097611 £16.95

One in Five

The Assessment and Incidence of Special Educational Needs
PAUL CROLL and DIANA MOSES

Up to one in five of the school population in the United Kingdom has special educational needs. This is the first major survey of the nature of the difficulties that these children experience in the classroom context of ordinary junior schools. It is based on research involving interviews with heads and teachers, and on extensive observation of children in junior classrooms.

0710203225 £12.95

ROUTLEDGE & KEGAN PAUL
14 Leicester Square, London WC2

ARTS

Debbie Horsfield's career as a playwright began when she was four. "Whenever I got bored I used to tell myself stories, full of dialogue and usually with myself as the heroine. I often couldn't wait to go to bed to finish off the current story."

After that there was a bit of a gap which terminated when, as a student at Newcastle University, she bashed out a play "because nobody else could be bothered" to fill a vacant slot at the Edinburgh Festival. The play was about girl football supporters, "a subject dear to my heart". The rest is history: Bill Morrison at the Liverpool Playhouse liked it and commissioned another on the theme, which won her the Thames Television writer's award for 1983, which led to a commission to write two more plays about the four characters she had created. Acclaimed in Liverpool, *True Dare Kiss*... and... *Command or Promise* were chosen to help launch the current 10-play firework display at the Cottesloe. The former got a rapturous reception from three leading critics, and glowing praise from most of the rest: the latter was due to open last night.

Like Hockney with his swimming pools, Ms Horsfield has made a virtue of the intensity of her obsession. She was first taken at 12 by her father to watch George Best and Bobby Charlton play in a night match, and she thought it was the most wonderful thing she had ever seen. She and her four younger sisters all became fans: the four protagonists of *True Dare Kiss* are an undergraduate, a hairdresser, a battered wife, a punk rebel - all divided in many things but they all rally to Manchester United.

"There's real drama in it - you can go from ecstasy to despair in seconds. I blush to say it, but the excitement of a good match has beaten anything I've ever felt in the theatre." This ought to sound bogus, but it doesn't. Debbie Horsfield talks as she writes, with bold clarity, and without posturing for effect. She directed *Volpone* and *A Doll's House* at university, and she made a special study of Restoration drama, but her attitude to life is

Goal fever

A new playwright is being hailed at the Cottesloe. Michael Church reports



bracingly unitary. Life, as she hammers it into art, takes on an authentically headlong quality. *True Dare Kiss* presents anxious, driven figures hurrying across an inhospitable landscape. The scenes are short and intricately woven, the dialogue is jabbingly Mancunian, the tension is between the characters' inbred drives and the social realities they must face. She went back to Manchester to write it, and regards it as a sort of summation of her previous 10 years. "It's almost a documentary - I was reporting what I saw and had lived through."

She did it over four months, putting in up to 12 hours a day and often seven days a week, terrified by the deadline and with scarcely a conscious thought as to its underlying philosophy. The result is a passionate social statement which - in its first half at least - is preserved by its ironic intelligence from falling into standard left-wing cliché. One critic condemned its "tape-recorded" dialogue, missing the fact that behind the character's naturalism lies much clever artifice. One or two London critics found its endemic vio-

lence improbable: one or two Liverpool critics said it was too near the bone for a nice night out.

She talks with irritation of the ban that was placed on any rewriting for the Cottesloe run - she's been itching to tidy things up and clarify some of the characterization. She thinks two plays ahead, and is half way through the next which is - well, fancy that - about Club 18-30. Commissioned jointly by the Liverpool Playhouse and the Royal Court, this will be set in Benidorm whither she was despatched, with a sister for company, for a holiday this summer.

It was, she says, quite a week. She disliked the reps who promulgated the Club's philosophy - compulsory promiscuity, and a herd mentality which bore cruelly down on the shy - but she will probably work exhilarating magic with the Club's paying victims. Were they inhibited to find a writer infiltrating their ranks? "No, they all wanted to be in the play. What they couldn't handle was the idea of a recently married woman going on the holiday alone, and, even stranger, that her husband would let her."

Past into present

Les Misérables - A Musical. By Alain Boublil/Claude-Michel Schönberg/Herbert Kretzmer. RSC Barbican Theatre. As I Lay Dying. By William Faulkner/Peter Gill. National (Cottesloe) Theatre. The Deliberate Death Of A Polish Priest. By Ronald Harwood. Almeida Theatre. The Caucasian Chalk Circle. By Bertolt Brecht. The Young Vic. Mrs Warren's Profession. By Bernard Shaw. National (Lyttelton) Theatre.

Les Misérables is a mammoth musical, a dramatization of Victor Hugo's sprawling classic novel of low-life and revolution in Paris circa 1830. A brief Prologue introduces outcast "criminal" Valjean and his implacable policeman-pursuer Javert; the net of mercy which redeems Valjean and sets him on the road to sainthood. The rest details the making of this saint: his loving care for the waif Cosette, his support for doomed revolutionary youth, Javert's suicidal despair at his redemption and Valjean's holy death. A bold subject for a musical which has encouraged detractors concerned at the reduction of Hugo's original. Those who have never read that (my hazy knowledge of the story stems from a *Frederic March* film) will be free to judge it on its face value.

At that level it is stupendous. John Napier's magnificent designs, superbly lit a chiroscuro by David Hersey, vividly recreate 19th-century France in wonderful stage pictures. He and Trevor Nunn, deploying a smallish cast, fill the stage with richly inventive kaleidoscopic changes of place, action, mood and emotion. A talented cast of singing actors give it all their energies, earning deserved cheers. Why did I hold back? Despite the brilliant musical arrangements (sub Bach, Verdi, Weill, Bart, etc) the numbers sound the same, and the swift mood changes appear more calculated to affect the audience than advance the story. Storytelling by declamation during frozen tableaux passes for dramatization in Peter Gill's stage version of Faulkner's novel *As I Lay Dying*. The death of "poor white" Addie Bundren exposes family hatred, paternal des-

pair, sibling rivalry in the familiar tradition of the American Deep South. Numbing boredom and overwhelming unbelief drove me from it at the interval. Ronald Harwood's dramatization of the transcript of the trial of Father Popieluszko's murderers, *The Deliberate Death Of A Polish Priest*, held me riveted. Kevin Billington's restrained anti-theatrical flourish direction presents chilling truth unadorned. Pileon Diss's blue-box courtroom underlines its effect, and a superb cast relive their originals in a way that prompts the question: "surely these are not actors acting?" The piece opens with Popieluszko himself delivering a simple homily on Justice, thus establishing the man who is at the centre of the trial. We know, then, who has been murdered; who is being vilified. It is October 19, and this all happened exactly one year ago. *Deliberate Death* is investigative theatre at its best.

The Oxford Playhouse Company's production of *The Caucasian Chalk Circle* ought not to be missed either, though bad timing has brought it to London on the eve of ILEA schools half-term holiday. Those who dislike Brecht's heavy-handed, wordy didacticism will be dismayed by the simple charm and directness of Richard Williams' cast. Marty Flood's colourful designs and Stephen Warbeck's astute music add to the theatrical delight of a "fab" in which everyone gets what they deserve. Sylvester McCoy is wonderfully droll as Blockhead, furiously energetic as Azuk, and has a wonderful way with lines remembered and prompted.

What prompted the NT's revival of *Mrs Warren's Profession*? Imperiously directed by Anthony Page, Shaw's pioneering play shows its melodramatic theatrical origins but also surprises with its relevance to our profit-hungry, money-value society. Joan Plowright in stunning form as the eponymous matronly Madame of a network of brothels. Jessica Turner nicely catches daughter Vivie's moral "assurance". Mark Payton the Peter Pan wishfulness of Frank. Robin Bailey (Pruett), Nicholas Selby (Rev. Gardner) and John Savident (Sir George) effectively establish every nuance of social snobbery.

John James

Playroom-style politics

A Strange Fruit. Tara Theatre in Education Company. Touring London Schools until November 22.

With this new performance-based theatre in education piece, Tara have somehow achieved a TIE first - a programme in which the accompanying teachers' pack has greater educational value than the play. That's not to say that the play isn't either good or useful, it's just that it's likely to be very demanding on both teachers and pupils in fourth and fifth years, for whom it has been devised.

A Strange Fruit looks at the way Asian labour has been exploited in South Africa and in Britain, and exposes some of the similarities between the treatment of Asians in the South African Natal in the second half of the 19th century, and their treatment in Britain in the second half of this one. At root, the problem is British colonialism, using labour as a commodity that can be transported, transplanted, then dumped when it has no further use.

Tara have shied away from their usual accomplished documentary style for this programme. Instead, it's performed "playroom" style, with the three actors pretending to be children retelling the story "all jumbled up". Some of the parallels between the British and South African experience are clearly (and provocatively) juxtaposed. South Africans' sudden insistence that their mobile traders should have been through a "proper" Christian marriage, taking ridiculous similarities to the notorious

Henthrow virgility tests. "Men are not machines" is the theme of this *Strange Fruit*, even if other men treat them as such. It seems that Tara have decided against the documentary approach because it is itself too mechanistic. The trouble is that the play, while beautifully and energetically performed, does occasionally lapse into some obscurity, as obscenity that in some cases teachers will be left alone to deal with, using the follow-up pack.

It's here that I find a genuine sense of waste. The pack, in the shape of a professionally produced book, packed with source material about the subject matter, with some excellent material from some of our greatest politicians, notably Enoch Powell and James Callaghan. The two countries' history of Asian worker exploitation are set out side by side and the parallels are entirely striking. Some of them are out for dramatic presentation.

In any event, teachers who book *A Strange Fruit* would be wise to look carefully at the work pack "history of images, experiences and memories" that form the play don't stand up on their own, however easy they are on the eye and ear. They need an informed contribution other than the teacher, or the actors themselves.

Nick Baker

For more details, ring Koghan Mahmud, 01-871 0230. Tara Theatre in Education is at 365, Garrard Lane, Enfield, London, NW11 4ES. Phone 01-871 0230. *A Strange Fruit* can be arranged at teachers' request.

ARTS

Was it just a holiday romance - white kids flirting with reggae, black youngsters "breakdancing their unemployment away"? Just some of the more graphic reactions to the first year of the Music Performance and Communication Skills course, as organizers, students and sponsors turn their thoughts towards the future. The speaker is Bruce Cole, composer in residence at the Lewisham Academy, one of the venues in which students of the Guildhall School of Music and Drama have been working this year, how far has the course fulfilled its objective "to broaden the horizon of students and equip them with the skills, knowledge and insight necessary to communicate with audiences in different contexts?"

The very existence of the Project, the preliminary stages of which were outlined in *The 723* last year (October 19), is remarkable in a number of ways, not least of which is its debt to its initiator, Peter Renshaw, an enthusiast and visionary with a flair for organization. It is hard to associate the man who prefers a jam session to a music competition with a former principal of the Menuhin school. Yet it is through his efforts that sponsors have been wooed and the Guildhall persuaded to adopt the course.

During the first two terms students performed in hospices, special schools, community centres and prisons as well as in more orthodox institutions. In the summer term, two significant educational experiments took place. One group of 10 went to work with 30 Bangladeshi children in Canon Barnett School, Tower Hamlets. Another focused on Lewisham Academy, a largely GLE funded community music centre where young people, for a membership fee of 50 pence, can try out their skills in rock, jazz and reggae - from scratch. Both projects were designed to explore the meeting ground between the contrasting musical worlds of Indian, Afro-Caribbean and western cultures.

Canon Barnett is a school without a musical tradition. There are various reasons why the doors of the instrument cupboard have scarcely been opened in the past few years. Headteacher Sue Gilbert blamed staffing problems; language difficulties and cultural differences have also been inhibiting factors. With the assistance of Guildhall students, the music and dance team Gemini-Bhavan, who spe-

In performance

Philippa Davidson assesses the first year of the Music Performance and Communication Skills Project

cialize in the mixing of western and non-western styles, and much preparatory work from ILEA music coordinator Leonora Davies, the children were able in four sessions to construct a music and dance drama based on their own story and musical ideas.

An educationally worthwhile experience for the pupils of Canon Barnett, but what about the Guildhall students? I asked them what turning somersaults and telling stories to children had to do with performance in the concert hall. The cellist of the group was emphatic: "It helps me in my ensemble playing... with children you have to project yourself and that's good for communicating with an audience."

At the Lewisham Academy a different group worked with local residents and musicians from the National Jazz Centre. In his post mortem on the experiment, Bruce Cole summed up the initial problems: "Many of the students at the Guildhall had never

been required to improvise more than a perfect cadence... Academy students were equally unfamiliar with traditional theory and at times found their musical literacy a handicap. So both groups had much to learn from each other."

Although musically and socially Guildhall students seemed very much the visiting team, one of the young blacks told me what he'd got out of the experiment: "I saw how hard they have to study to make a career in music."

Two projects came together on the stage of the Albany Empire, Deptford's community theatre packed on this occasion with interested parties talking animatedly about breaking down the social barriers. For the audience there were certainly no discernible barriers between the musicians on stage and the different cultures they represented. Perhaps the least satisfactory aspect of the occasion was the performance itself. As Philip Jones, the Guildhall's Head of Wind

Time to take steps

No crystal ball is needed to know the main issues of the coming year in British dance education and training. End of term shows, in the private sector especially, were as much clues to the future as summaries of past achievement. Considered in this light, the Central School of Ballet's recent programme at The Place provided the most significant clue in a series of school shows from Arts Education Schools and Laine Theatre Arts to the Doreen Bird College of Performing Arts, the London Studio Centre, Rambert School, Bush Davies, London Contemporary Dance School and The Royal Ballet School.

Central's performance was the outcome of a policy of multi-racial commitment combined with a classical training of singular rigour. Modern dance schools have always pursued this policy, with wonderful results. Not so their classical colleagues, so that multi-racial Britain remains virtually unack-

nnowledged on British classical stages. Various explanations have been argued. All of them are exploded by Central's success, re-emphasizing for 1986 the importance of the racial issue in British classical ballet.

Discretionary grants, always a problem because of their erratic and anomalous application, seems increasingly hard to get. The crisis may come in 1986/87 when rate-capping and other options really begin to influence policy. The main other issues suggested by the end of term shows was a potentially damaging class distinction sometimes reflected in the grant policies of local authorities. Pre-vocational modern dance training happens mostly in state schools. Pre-vocational classical training takes place mostly in private studios paid for by parents. The effect of this is much more profound than to limit access and so presumably miss potential talent. Watching the graduate show of the College of the Royal

Academy of Dancing, for example, one was made aware of the huge gap in ethos and ideology between the training communicated to these future classical teachers and the bigger world of young people who are their potential students. If classical ballet is to attract these young people in significant numbers, it is crucial that teachers and examiners should develop a clearer relevance between traditional approaches in classical studio and the experiences young people bring with them to all learning. Not one of the big classical examining bodies seems to have given much thought to closing this gap, yet it can be done. One optimistic sign is response to the new O level, and the newer A level GCSE examinations in dance including classical ballet.

Peter Brinson

C for entertainment

The Note that got away. Kids Theatre Group. Peter Samuel Hill, Royal Free Hospital, October 11

Once upon a time a composer asked an infant teacher if he could borrow her class to try out an idea for a musical. That was how the *Kids* music, dance and drama workshop began. The group, which numbers among its illustrious patrons Sir Colin Davis and Sir Peter Hall, exists to give children a taste of the enjoyment of public performance. Joining *Kids* provides an especially valuable experience for children from primary schools with little or no music on the timetable. The 80 or so members, aged between 5 and 12, also have the opportunity to hear West End

musicals and visit backstage. The aim, says composer Adam Collins, is to give all children, not just the star performers, a first-hand experience of live theatre.

It would certainly have been easy to be mesmerized by the child stars in *The Note that got away*. Young talent abounds in N12 - tap dancer, confident singers, and some delightfully controlled chorus work from the teddy-bear-hugging reception class at director Daisy McKie's school. But out of the mouths of babes and sucklings come forth such profundities as "We are dynamics" (and they all had *ffs* and *pps* on their chests to prove it), and "Well, Nicola, now you've learned the basics of musical notation". Not very dramatic stuff. The story is all about a prin-

little miss called Nicola who wants to learn about staves and barlines and what happens when her brother, who thinks all this is rather boring, sets free middle C. The music was hummable and foot-tapping but the idea of using a musical to explain the intricacies of notation seemed a little misconceived. Perhaps one or two items could be isolated and used in the classroom to teach specific points as the presenters intended. But on the whole the music worked better as entertainment than as a teaching tool.

P D

Kids meets every Friday in Finchley. For further information telephone Daisy McKie (01-455 5030) or Adam Collins (01-205 3072).

Saints and sinners

Je Vous Salue, Marie (18) Metro Cinema, Rupert Street. *Cop au Vin* (15) Screen on the Hill. *Subway* (15) Lumière Cinema, St Martin's Lane.

Jean-Luc Godard's film arrives at the new Metro Cinema in the Trocadero with a condemnation from the Pope and a prize from the Catholic Jury in Berlin. I suspect that the jury had been looking at the pictures (many of the film's images convey a feeling of awe, arguably religious), the Pope reading the script. The Gospel According to Jean-Luc makes Mary a petrol pump attendant and Joseph a taxi driver and, while this transposition of the story into a contemporary setting is unobjectionable, the contemporary attitudes that go with it may not be. Joseph responds to Mary's mysterious pregnancy with understandable frustration, making him a doubtful candidate for sainthood. And there is a typically Godardian subtext, putting the story of the virgin birth on a par with pseudo-scientific theories on the extraterrestrial origins of human life, hitting the Christian belief to some very shaky myths: When you add in the species of Mary offering her naked belly to Joseph or writhing on her bed, you can understand the reservations of conservative Catholics.

Godard's intentions are another matter: His style, as always, is disconcerting, giving the illusion that an argument is being constructed, word-



Claude Chabrol with Jean Poiret in "Cop au Vin"

ly, on a different plane from the often enchanting images on the screen. The meaning remains, in the last resort, ambiguous and it is probably a measure of the film's success that it can inspire contrasting interpretations from different Catholic authorities. "You can do anything when you're with the police," the genial detective (played by Jean Poiret) in Chabrol's thriller bends the rules in both directions, roughing up suspects and letting a murderer go unpunished, to ensure that justice is done in the end. The film is set in the claustrophobic provincial society that Chabrol enjoys, and concerns the efforts of the local doctor and lawyer to dispossess a widow (Stéphane Audran) and her son in order to redevelop their home. Right triumphs thanks to the Law acting above the law, and this is vintage Chabrol: well-paced, well-acted and absorbing.

In Luc Besson's *Subway*, it is not the chief cop (Michel Galabru) but his benchmen, nicknamed Batman and Robin, whose methods are dubious. In any case, the real hero (Christopher Lambert) is on the wrong side of the line separating the public corridors of the Paris metro from the service ways behind them and the appealing crooks who haunt them, according to this spartan fantasy. The hero (Christopher Lambert) is a would-be black-masquerade to Fantomas and other masked avengers, result the heroine (Isabelle Adjani) from a stifling marriage while on the run from the police and another gang. Everything moves so fast that the plot hardly matters and it is easy to see why this is proving to be one of the most successful foreign-language films in Britain this year.

Robin Buss

French week

Colchester Mercury Theatre is laying on a cultural, educational and epicurean French week, from November 11-15, to coincide with the end of the run of Pina Gonsky's play *Play* in the main house.

For middle-range students, there will be a production of *Le petit prince*, and an opportunity to trip along prepared films in French - scenes, games, songs, even mime.

Anne-Marie Mately-Michard (in French, on Sartre) and Dr Michael Wornton of University College London (in English, on Existentialism). Selected scenes from Molière's plays will be performed in English by local A level students under the direction of Jeremy Rowe.

The week also involves the Alliance Française, the Mercury Theatre Club and the local Twining Society (Colchester is twinned with Avignon) in evening events, including wine tastings, travel lectures and a talk (in French) on Edith Piaf.

Details from Frances Brace or Howard Meaden at the Mercury Theatre: (0206) 577006.

Julie Burrows

Radio

Story time

Radio 4 marked (if not exactly celebrated) Children's Books Week with two programmes. A feature on *Woman's Hour* considered ways of teaching children to read. The difference between the phonetic and look-and-say methods was illustrated but nobody explained whether phonetics and look-and-say were or were not the same. We heard of two new reading schemes but (despite listening with pen in hand) I failed to catch the titles of either and no details were given at the end of the item. What did come across, however, was the conviction that children need interesting stories and adults with whom to discuss them.

Children's literature was also the subject of Tuesday Call, Julia Eccleshare of the *Good Book Guide* to *Children's Books* and Robert Leeson, writer of the *Grange Hill* novels, fielded a variety of questions and opinions. Would-be authors asked for advice. Little Black Sambo was praised as literature but Leeson suggested you wouldn't buy it today "just as obviously you wouldn't buy a goliwog". The caller sounded as if she might well buy a goliwog. Only one child rang in (it was during school hours) to ask why *Adrian Mole* is so popular and a caller came on to say to cite it as the cause of all school violence. "If you are going to condemn or criticize, you must watch first," said Leeson patiently. "We have seen on the Isle of Wight and they don't run on top of the ground," said the caller - and was immediately off the air.

Echoes of another age will reverberate this Tuesday when the bubble-captioned words of *Corky the Cat* and *Dennis the Menace*, along with the creations of Capt. W E Johns and Angela Brazil, are revered by collectors of Antiquarian Books and Comics (Radio 4, 8.30pm).

David Self

END PAGE
American rock music, short stories and poetry on page 56

Short change

Outlook. Flying Pig TIE. Touring London Schools.

This hour-long play for 15 and 16-year-olds cuts through old-fashioned assumptions like a hot knife through butter. Gay men aren't all limp wrists; women make good scientists; actors aren't always superbly confident in real life; the teaching of careers doesn't take into account the rise in youth unemployment, etc, etc.

Unfortunately *Outlook* replaces these assumptions with others: untested family backgrounds lead to a life of crime; teachers lack insight but mean well and drug pushers wear leather jackets and dark glasses. In all, the play falls over itself to combine a teen-oriented street cred image with liberal attitudes about gender, sex, values, drugs, education and social values. A laudable (if ambitious) aim, perhaps, but the result is a piece of almost jaw-dropping naivety and superficiality.

Tom (gay, caring, loyal, sensitive, artistic) gets his big acting break with the BBC at the same time as his

classmate Steve (macho, aggressive, attention seeking) has a football trial for Leyton Orient. Tom and Vicky (outspoken, bright, ambitious, feminist) try and help Steve as he descends to the lower depths of crime - the victim of a Vietnam-booked mum. There's a number of appearances from Ange (scatty, randy, stupid, bigoted) who eventually gets booked on heroin and pregnant by Snake, the vicious drug pushing wearer of the shades. Played as a flashback, the audience are told at the end that "If we look back at what happened and understand it we can see it doesn't happen again." *Outlook* is a well-meaning enough piece with some genuinely funny lines and slickly doubled performances. It's hardly TIE though, with no participation and little left open for teachers to get to grips with in class discussion. The claim that such a two dimensional piece, which seems merely to exchange old clichés for new, can change anything (except an hour of the school timetable) verges on the preposterous.

Nick Baker

Allegory

Moonsadow. Kaleidoscope Theatre, St Andrews Church, West Bromwich.

Moonsadow, an allegorical story of good evil, seemed particularly at home in this church setting. It is written and directed by Jonathan and Carolynne Revell, two special school teachers who run a theatre company for mentally handicapped children and teenagers which gives many public performances a year. The play has been skillfully

tailored to the abilities of its cast of 30 young people. Dialogue plays a less important role than movement and mime, though where speech is required the actors' voices have been pre-recorded and woven into a continuous background tape of sound and music which, together with some atmospheric lighting, sets the changing moods of the narrative. An impressive wardrobe of props and costumes, made by the company's production team, complete the visual effect and have certainly helped the actors to develop their sense of character and style in a production which does not ask its audience to make any allowance for disabilities.

Ann FitzGerald

Extra sensory perception

John Tranter surveys a wide range of electronic sensors

In the "old" days, we had to content ourselves with separate instruments to measure various parameters in the laboratory or in the field, each with their own analogue meters. These individual units are still very valuable, but times have changed with the advent of the microprocessor. Now there is often the need for greater flexibility or for gathering information for direct input into a microcomputer to monitor reactions or display and analyse the collected data.

Philip Harris Ltd has responded to this need by producing a wide range of electronic sensors which between them can measure light, temperature, pH, oxygen, humidity, movement, atmospheric, manometric and other pressures, strain and magnetic field. Perhaps further sensors will be added later to the range to measure such factors as sound or salinity, for which at present one must resort to other equipment or techniques.

The sensors have been designed so that they can be connected to a voltmeter, oscilloscope, chart recorder, multifunction instrument such as the VELA or GIPSI, or (via a suitable A/D converter) to any microcomputer. For these connections they have two outputs of 0 to +1V or -250 to +250mV, achieved using colour-coded 4mm sockets.

The electronics of all but three of the sensors are housed in compact blue cases measuring 125 x 65 x 40mm. The electronic barometer, pressure sensor and strain gauge unit are in larger boxes of 175 x 160 x 70mm. All the units are battery-powered (using either a PP3 or HP7 cell for the smaller sensors and four "C" cells for the three larger units). Each has a battery test facility and the manufacturers claim that the circuitry used will ensure a long battery life.

Where appropriate, sensor probes are attached to the units via a short, detachable lead. The majority of the sensors have been pre-calibrated so that the full output range of 0 to 1V or -250 to +250mV corresponds to an appropriate entire sensor parameter range.

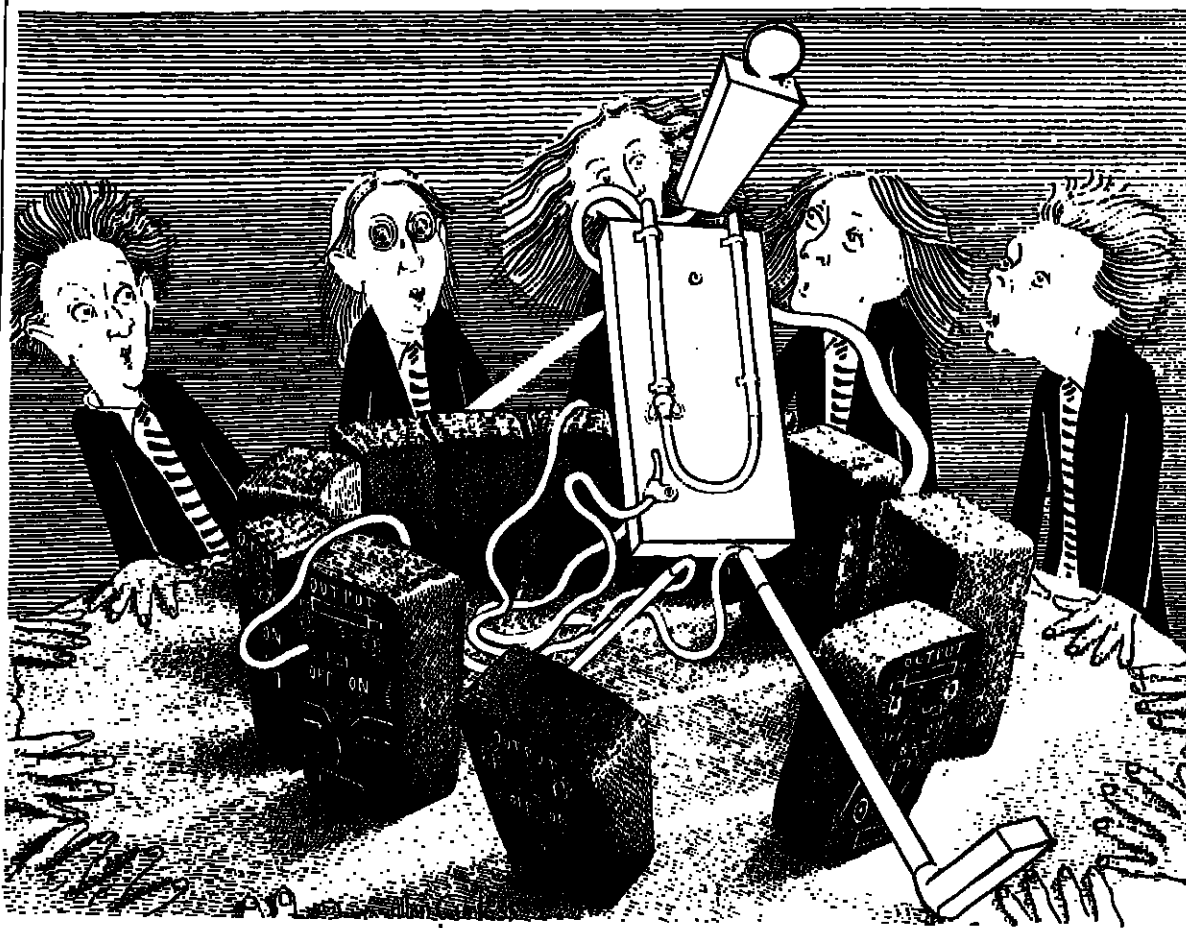
The Light Sensor has an integral cadmium sulphide cell but can also be used with an external probe which is connected to the unit by a miniature jack plug. The sensor will measure from approximately 0.1 to 10,000 lux on a logarithmic scale. Thus, bright sunlight will produce a maximum 1V output. There are no controls to adjust and the sensor is very straightforward to use, giving good comparative or quantitative readings.

The Temperature Sensor has three ranges: 0 to 100°C, -10 to +40°C and any 10°C span from 10 to 40°C. It has been calibrated for use only with the stainless steel probe supplied, giving a linear output on each range. It should be noted that the probe cannot be immersed in a liquid simultaneously with a pH or oxygen electrode because of electrical coupling between the electrodes. For such simultaneous readings, glass probe will be needed, but then the sensor will have to be recalibrated.

For use on the 10°C span range, the required span is selected by moving a knurled edge control. The probe is placed at a known temperature in the desired range and from information given in the accompanying notes, the expected voltage output at this temperature is also known. The knurled control is now moved until this voltage is obtained on a 0-1V meter.

Potential users of this 10°C span range must however be warned that the knurled control will need a great deal of turning before the appropriate voltage is given. Because of the rather tedious nature of this setting-up procedure, the provision of a reset span facility is welcome. Having set the 10°C span appropriately, the range switch is moved to "reset span" which internally disconnects the probe and produces a reference output voltage. If this is measured and noted, the sensor can in the future more quickly be set into the same 10°C span by adjusting the control to this output voltage.

The sensor performed well in use with very reasonable accuracy. At the top of the ranges, there was, however, a small deviation. The -10 to +40°C



range is not so easily interpreted on a direct reading voltmeter, but altogether this is an attractive temperature measuring instrument.

The pH Sensor is a straightforward instrument which provides a linear output for measurements of pH over any 10pH span between 0 and 14. In fact, the output at the 0-1V sockets can go negative and positive and this can be beneficial if the sensor is used with either the BBC Micro's analogue port or the Harris Datastore computer program to display the pH data. In these situations, the full 0 to 14 pH range can be continuously monitored, which might be necessary in certain titrations.

The sensor can be calibrated with an electrode in a buffer of known pH by adjusting the "set buffer" rotary control until the expected voltage output is obtained for the pH span required. Later, simply by switching the unit to "set buffer" and adjusting the output to the previously noted voltage, the same pH span can be used. The sensor worked well, but with my electrode there was some drifting for higher readings.

The Oxygen Sensor will measure both dissolved and atmospheric oxygen using a polarographic electrode (available separately). It is easily calibrated with the electrode in air, oxygen-saturated water and oxygen-depleted water by adjusting the voltage output to the appropriate level by use of the "set reading" control. The optional use of a thermometer probe is an advantage since the sensor then automatically compensates for changes in temperature.

The electrode supplied by Harris is easy to fill and clean but a feature of its operation (and all other similar oxygen electrodes) is the depletion of oxygen in the water immediately surrounding the electrode. Thus, unless the elec-

trode is constantly stirred in the water, readings will drift downwards. With the Harris sensor and electrode, generally satisfactory results were obtained with constant agitation of the electrode essential.

The Humidity Sensor and accompanying probe are very easy to use, with no controls to be adjusted. The unit gives relative humidity readings between 10 and 90 per cent.

The probe seems reliable but response time is slow, so rapidly changing humidities cannot be monitored. This will not, however, normally be a problem. When comparing environmental humidities, their actual differences may not always be great and so only small changes in readings are obtained. The use of the Datastore program with a computer will be helpful in providing some expansion of the range of possible readings.

The humidity sensor is an attractive unit providing quantitative results in situations where vague comparisons of the colour of cobalt chloride or thiocyanate papers have often been the best means available of monitoring humidity in the past.

The Position/Movement Transducer has been designed as a less sensitive and more robust alternative to the Philip Harris Electronic Arm. Fitted with a boss for attachment to a clamp stand, it consists of a pivoted, counterbalanced arm 250mm long. There are six attachment holes in the arm providing a range of possible vertical movements of between 0-40mm and 0-90mm.

The arm is very effective for monitoring a variety of small movements but a force of approximately 50mN is needed to rotate it. It is, therefore, not particularly suitable for very rapid or gentle movements, unless the judicious use of plasticine to counter the counterbalance is contemplated.

The Electronic Arm will still be

needed for situations such as frog heart or nerve/muscle preparations, but the transducer is very competent for use with a spirometer or in mechanical oscillation experiments. The means of attachment to the arm will be determined by the experimental situation; in some cases, it will be essential to use very stiff wires.

The Pressure Sensor and Electronic Barometer Sensor are very similar and contain bellows which move with pressure changes leading to the generation of the output voltage. In the pressure sensor the pressure measurements are relative to atmospheric pressure on two ranges, $\pm 0.1 \times 10^5$ Pa and $\pm 0.5 \times 10^5$ Pa. Pressure inputs must not exceed 1.3×10^5 Pa above atmospheric pressure. An internal Allen key adjustment can be used to alter the operational range of the sensor but for day-to-day use an external control is provided for fine adjustments with varying atmospheric pressures.

The Electronic Barometer gives an output voltage from 0 to 1 corresponding to changes in atmospheric pressure from 0.95×10^5 to 1.05×10^5 Pa. There are no adjustments to be made other than internal ones to correct for height above sea level. Both sensors gave good, reliable results but, as stressed in the accompanying notes, it is vital to ensure that the instruments are not subjected to any mechanical vibration as this seriously affects the output.

The Volume Pressure Manometer Sensor is designed for smaller volume/pressure changes. There are two manometer tubes for connection to the manometer sensor unit. One has a bore of 2.5mm with an operating length of 100mm and ethanol is used in the tube; the other has a bore of 6mm and operating length 330mm and is used with deionized water. The narrow bore tube is for situations involving only very small volume changes (up to

0.2cm³), such as in studies of insect respiration.

The left hand tube of the manometer has two pieces of metal foil attached which form a capacitor whose capacitance varies with the height of the liquid in the tube. It is important not to touch or damage this part of the manometer in particular, but the tubes are mounted on backing plates which also carry Terry clips to attach the manometer to a vertical support.

In use the manometers gave splendid results, responding rapidly and sensitively to volume/pressure changes in attached equipment. They are simply plugged into the sensor unit and there are no controls to adjust. There is, however, a rather tricky initial calibration procedure that has to be carried out to match the manometer tubes to the sensor. Fortunately this does not need to be repeated.

The Strain Gauge Sensor consists of a stable bridge power supply, Wheatstone bridge arms for the strain gauges, coarse and fine controls to balance the bridge and a very sensitive, stable bridge amplifier. It can thus be used to measure strain, force, weight or bending moments. In addition, it can be used for differential temperature measurements using a home-made thermocouple, giving a 1V output for a temperature difference of 2°C.

As the amplifier is very sensitive, the sensor must be protected from electrical interference and it should not be used in direct sunlight as this will cause thermal drift. The accompanying notes describe fully the operation of the sensor and associated strain gauges. (These are not supplied with the sensor and must be purchased separately as necessary.)

The sensor easily gave good, reproducible results, providing the precautions mentioned above were observed. Mounting the strain gauges, however, a very delicate task.

The Magnetic Sensor's probe has an integrated circuit using the Hall effect for its operation, and with its measurements of magnetic field strength in two ranges of 0-10mT and 0-100mT can be made. In fact, with the 0-100mT range, readings are from -50 to +50mT with the zero control adjusted to give 0.5V output in zero magnetic field. The 0-10mT range is more flexible, giving readings of 0 to 10mT, -10mT to 0, or -5 to +5mT. The unit was again easy to use.

Altogether this is a very impressive collection of instruments. Buying them all would be a very expensive outlay but probably unnecessary, depending on the monitoring and measuring requirements of a particular educational establishment. The entire range does provide the means by which the majority of parameters commonly studied in aspects of science or technology can be appropriately monitored and displayed.

To derive the greatest benefit from the sensors, it is of course necessary to use them with other equipment - particularly a microcomputer with an A/D converter - and for this application the Harris Datastore program will be an extremely valuable addition.

ELECTRONIC SENSORS: Light Sensor (C677101) £34.95; Temperature probe (B185901) £51.50; Temperature Sensor and Probe (C677230) £54.95; Glass Temperature Probe (C677032) £36.11; pH Sensor (C677003) £38.75; Oxygen Sensor (C677003) £38.75; Oxygen Electrode (C677330) £43.20; Temperature Compensating Thermistor Probe (C677512) £37.75; Humidity Sensor and Probe (C670935) £72.25; Position (Movement) Transducer (C677702) £45; Pressure Sensor (C677908) £89.58; Electronic Barometer (C677805) £85.50; Manometer Sensor (C678007) £38.28; Manometer Tube (2.5mm bore) (C678100) £28.75; Manometer Tube (6mm bore) (C678056) £35.95; Strain Gauge Sensor Kit (2 x 350 cm gauges, adhesive pads, 1 tube of cement, spring steel strip (C677609) £12.75; Strain Gauges + Pads (C677505) £7.67; Magnetic Sensor and Probe (C678105) £39.13; Datastore Program (A299310) £17.50.

All available from Philip Harris Ltd, Llyn Lane, Sharncliffe, Staffs WS1

notes

BRITAIN IN THE BLITZ

It is not only the sights and sounds, but the smells and taste of the blitz that permeate the air of this exhibition at Cornwall Aero Park.

Here, in the closest detail, is the living room of a typical terraced house, with a Morrison's food shelter and a bicycle.

wireless giving out the honeyed tones of the news announcers. Nearby is the dangerously damaged house lit by searchlights and gun flashes, the fire and smoke from its gutted interior polluting the whole corner of the exhibition.

There are pubs, shops, sheltercensers, cookers, pots and pans, blackout curtains, even a phone box of the time, and yards of sticky brown paper strips, everything but the chard bodies.

"Britain in the Blitz" runs till October 31 at the Cornwall Aero Park and Flambards Village, Clodagh Lane, Helston, Cornwall TR13 0GA (tel. 03265 4549).

STAR SHAPES

The use of stars as an inspiration for craft work is the basis of "Making Star Shapes" (£2.20).

Through clear instructions and simple diagrams, it shows how to make a wide variety, ranging from simple flat ones to complicated three-dimensional constructions of cardboard, drinking straws, foil, tissue paper, drawing pins and paper clips.

Pine Tree Publications, Pine Tree House, The Street, Brundish, Woodbridge, Suffolk.

EXTRA

COMPUTERS IN EDUCATION

Government intervention in educational computing in the last 15 years has shown a number of failings. Uncertainty of direction, muddled thinking, uncertainty of purpose, wastage of talent all have been demonstrated in abundance. The country that produced Charles Babbage, Alan Turing and Donald Michie has scored a surprising number of own goals in its failure to support educational computing systematically.

The Lighthill Report of 1973 blighted the future of British artificial intelligence work. The National Development Programme in Computer Assisted Learning (1973-77) unearthed some creative talent and excellent software, but unfortunately ended just as the micro revolution was beginning, leaving surprisingly little trace.

NDPCAL Director Richard Hooper's Final Report of 1977 makes interesting reading today: he recommended "as a matter of some urgency" the need for follow-up and warned of the expense of dissipating the "impetus and talent" identified by NDPCAL.

Yet it was 1981 before the Microelectronics Education Programme really got under way, with a remit covering the UK minus Scotland, which had opted out. MEP's decentralised strategy provoked early criticism, partly because London-based civil servants were hostile to the idea of a Newcastle base and partly because delicate negotiations with groupings of i.e.s.s. and commercial publishers took time to produce results.

Memories of MEP's early faltering period have been overtaken by the wealth of its high-quality published software and training materials. MEP's patient adherence to its strategy bore fruit in abundance, but MEP has fallen victim to the intrigues of politicians and civil servants, and has been cut off in its infancy. It is rumoured that the DES wanted MEP's £5 million a year budget doubled, but was overruled by the Treasury who halved it. (MEP's allocation was only 0.005 per cent of the global education budget.)

After prolonged and damaging delays, Sir Keith Joseph announced in July that MEP would be axed in March 1986 and "replaced" by a £2.2 million a year Microelectronics Support Unit to be run by the i.e.s.s. Not surprisingly, many of MEP's staff were already looking around, and since the axe fell

many more have left for other jobs. Impetus and talent have been dissipated with vengeance.

Meanwhile, the Scottish Microelectronics Development Programme (SMDP) pursued a far more centralised strategy, with ambitious self-promotion and unhappy results. The independent evaluation of SMDP conducted by Edinburgh University in 1982 found that the majority of teachers were highly dissatisfied with support received from SMDP. ("We have supported SMDP rather than the

reverse" said a teacher.) Yet with miraculous timing, the Scottish Education Minister announced SMDP's indefinite continuation - just eight days before the evaluation report was published, and in disregard of its results.

SMDP is generally supposed to have improved somewhat since those days. Nevertheless, its software has received appalling notices from independent reviewers.

Considerable confusion surrounds the role of government schemes in the post-MEP era. There is also acute uncertainty about what direction to take in hardware-purchasing. While the DTT Micros in Schools schemes prevailed, the BBC Micro had almost become a de facto standard. With Acorn's troubles far from resolved, many i.e.s.s. are now debating a switch to 8-bit Amstrad systems (256 K micro, monitor and printer for under £400) - but are unsure whether the future lies instead with 16-bit systems like the Atari 520 ST or Research Machines' Nimbus.

The desperate need to exchange information and find out which way the wind is blowing may explain the overwhelming response to Ed-IT World's Edsoft conference in Loughborough recently. Organiser John Barker brought together 150 delegates from all aspects of educational computing - including, amazingly, three practising teachers - and gave them an excellent opportunity to consider how to collaborate.

Peter Waller of the DTT opened the day by outlining the department's Educational Software Support scheme (see below). It is intended to help the UK educational software market in two ways: by doubling the amount of money available for buying software, and by reducing the number of separate purchasers from around 6,000 schools to around 120 i.e.s.s.

From the floor, Tim O'Shea of the Open University vigorously attacked the DTT for cowardice in not providing a shortlist of "approved" software. Peter Waller's response (that users were better placed to decide what they needed than the DTT) suggested humility rather than cowardice. O'Shea retorted that DTT should at least have the courage to identify a blacklist of "disapproved" software. He seemed certain not only that he knew what was "rubbish", but also that other would agree.

continued overleaf

The DTT's software support scheme

classrooms and (c) of European Community origin. The DTT is willing to consider packages of materials as long as the "software" is the predominant part of the package. Otherwise, "the cost of software can only be recovered if it is identifiable as a separately billed item". All claims are to be retrospective, and there is no possibility of carrying over entitlement between financial years.

The allowance is calculated on the total numbers of pupils aged 11 to 16, and varies widely between authorities: from £350 for the Isle of Scilly to £163,000 for Strathclyde Region. There is no official short-list of approved software or suppliers: it is up to the authorities to decide how to spend the money. In fact, they can use it to supply software to primary schools as well as secondary schools (but not

further education). Software can be in any form. The examples given by the DTT are "tape, disk, chip, Rom pack, telesoftware", but this list leaves plenty of room for doubt. Logotrons are trying to get their Spry Board recognized. If they are successful, what about the Nalpa Type & Talk Speech Computer? Or the ANX Mouse? A DTT spokesman would only say that each case would be judged individually.

Software licensing agreements are eligible to the extent of the fee paid. The case of local authority publishing sources like ILECC, MEDUSA and RESOURCE poses interesting problems. The DTT accepts that as long as it is commercially available, local authority software could be eligible. However, it insists that an authority could not use the scheme to subsidise purchase of its own software products for its own schools. But what about two software-producing authorities who negotiate a reciprocal deal? DTT had "no comment".



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LOOK WHAT'S PACKED INSIDE OUR BOX OF TREASURES

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BOX OF TREASURES can be used as the core for a lengthy project on the theme of "boxes" or the individual items may be used independently for all manner of curriculum-related activities.

AMATION

EXTRA

Skills for life?

Jerry Wellington and Clive Opie review Microspecial, one of the most ambitious packages of programs produced this year



Microspecial
published by William Collins Educational and Hill MacGibbon
Complete package £250 + VAT
Separate programs at £17.50 + VAT

This suite of programs and pupils' material is designed to help 14-16 year olds with "modern learning difficulties" to develop life skills. The package is therefore described as a "Resource Pack for Learning Life Skills". This immediately raises the question of what life skills are, and how best they can be developed. In looking at the programs, the teaching materials and their aims, these questions have to be constantly borne in mind.

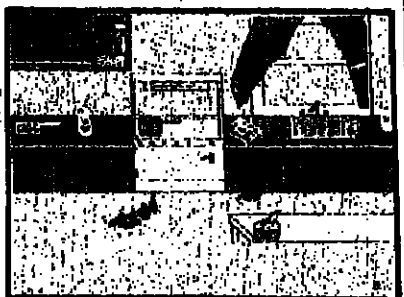
The package consists of 25 separate programs, each accompanied by a booklet containing teacher's notes and a statement of aims. The booklets are generally well written and the aims clearly stated, although some might be considered slightly far fetched, for example, "to encourage pupils to think about the structure of words and to identify meaningful chunks (phonemes and morphemes)". (FIND-WORD, program 7). However, the statements of aims will certainly be a useful guide to a teacher about to use a program with a class.

Microspecial is well packaged and impressively presented with attractive booklet covers, colourful screen displays, clear worksheets, and a pleasing blue box to contain the complete resource. This packaging helped to create a good first impression with the pupils who tried it out. However, once the programs were used in a classroom situation a few problems began to emerge.

Several programs cannot be used without a concept keyboard, but this is only indicated in small print on the inside of the accompanying booklet. A clear indication of whether all or part of a program requires an extra keyboard would be a great help in a busy classroom. Even then, those programs which do require a concept keyboard do not make it clear exactly which overlays need to be used, and when. Another point to be borne in mind is that the programs need the constant use of a disk drive. A program cannot be loaded up and then the disk removed, which is an important consideration for many schools.

The more general questions which need to be asked of a resource costing nearly £300 are: Does it really develop life skills in an effective way? Is a computer program the best medium? These are questions which we will try to answer having considered each program in turn. The programs are as follows:

Art and Design enables pupils to create designs and shapes on the screen using a good range of colours.



The concept keyboard needed and the number and similarity of the overlays may confuse pupils. The program probably succeeds in its stated aims, though whether these are life skills is open to debate.

Bank simulates the common banking operations of paying in money, writing a cheque and using a cashcard. It is not a very realistic simulation (especially the use of a cashcard) and we would suggest that a visit to a bank (after all they are keen to get customers) is of far more educational value.

Bike Insurance works through the procedures for assessing bike insurance. It is well presented, useful information and good worksheets. It will certainly open pupils' eyes as to the cost of insurance. (Though perhaps at £17.50 per copy it is overpriced.)

Classmates allows the entry of details of classmates (or anything else) and stores the information for future reference. It appears to be based on the well known classification program ANIMAL. It needs close supervision by the teacher if adverse or obscene data is not to be stored.

Clocks teaches pupils to tell the time with a variety of clock faces and a wide range of overlays for the concept keyboard. Quite a pleasant program to use, and it certainly develops a life skill.

Coins aims to help pupils to recognize British coins and to work with it, for example, paying for and working out change from buying goods. Poses the very legitimate question "Why use the computer?" Why not set up a make believe shop and use real coins?

Colourword allows a teacher to monitor the improvement in a pupils' vocabulary by comparing words used in a story to those stored in a chosen thesaurus. But it will require close supervision.

Context. This is described as a

simple to use wordprocessor providing an insight into the power of such a tool. We beg to differ. Try using WORDWISE or EDWORD if these are available before embarking on this program. Encouraging success has been obtained with WORDWISE even with pupils of low ability and/or motivation.

Datfile. As its name implies this is a DATABASE program allowing pupils to create and interrogate a datfile. A worthwhile program, straightforward to use (although the hefty manual could have been made clearer), good screen presentations and easy interrogation procedures.

Eating for Health. This program aims to make the user aware of what is a healthy diet. It is not effective and we question the nutritional values associated with some of the foods. A very bad limitation of DIET.

Findword provides the traditional type of wordsearch to solve and also allows pupils and teachers to make their own word squares. This is a useful program in a limited way, but is hardly original, except perhaps for its use of the concept keyboard.

Food for the Family encourages the pupil to think about buying food for a family for a week. Rather cumbersome to use. To order X number of a particular food you have to press a key X number of times. An odd colouring system is used to warn you about buying too much of one food - but you're only warned after you have bought it! We would question its educational value.

Keyboard Skills provides six fairly entertaining games to help pupils to find their way round a keyboard. Is this a life skill? Leaving that aside the program was enjoyed by pupils, as most games are.

Music enables the user to input a

music score then play it or edit it and finally save it for future use. Well written, easy to operate, it needs the use of a concept keyboard. But is it life skills?

Mystery. This is one of the best programs in the suite, certainly in the eyes of the pupils. Initially the user has to guess a mystery place or person by opening a series of boxes containing clues. However, pupils/teachers can create their own mystery, making this a useful, original and enjoyable program to work with. Perhaps some sort of scoring system would have added to its effectiveness.

Operation Kanker. The pupil becomes one of a space force unit to capture the notorious space pirate Kanker. Very simple to use, but the space attack game part of the program is trivial. There may be value in the associated activities: writing a news story, taping an interview etc, but certainly none in the program.

Paper Round. It is difficult to assess the aim of this program. The task is to deliver papers by the shortest route and should you not achieve it the computer can show you how it should be done. This type of program has appeared before. ICL-CES programs and WATCHPERSON are examples. Not good value for money.

Reveal. This game allows pupils to guess the words in a piece of text, for example, a simple poem. Remarkably similar to *Tray*, also published by MEP, it is fun to use and certainly educational, but not original.

Rise and Shine "teaches" pupils how to get up in the morning and "feel nice" at the same time. Of very doubtful educational value, and not enjoyed by pupils.

Safety is a simple but useful program which asks pupils to spot the dangers in a kitchen and a bedroom and correct them. The program certainly generates small-group discussion about safety, is easy to follow and enjoyable to use, but is it worth the money?

Shapes. This useful program allows pupils to create pictures by using ready made shapes, changing their sizes and moving them around.

Summer Holidays takes you through the stages of booking a summer holiday. Reading the brochure (one has been specifically produced for the package), entering your required holiday location, air flight, hotel rooms etc. A useful piece of work.

Survive is a very good material on how to survive for a week on a fixed income. The program aims at getting pupils to plan their expenditure and to save, for example to buy a stereo system. Probably one of the most valuable programs in the set. Comes with good worksheets.

Timetables presents pupils with the task of getting someone to various places on time. To do this pupils need to be able to read timetables and act upon them. The program exemplifies

the kind of everyday problem which typifies, in our view, the meaning of the words life skills. Good program and worksheets.

Weather is a database program which allows pupils to collect, store and analyse information about the weather. A valuable program with attractive displays and clear instructions. Is the use of this kind of database a life skill, however?

The quality of the individual programs making up the Microspecial package obviously varies greatly. Some offer tremendous potential for extended classroom use which could be easily integrated into other work, for example *Reveal* and *Dafile*. Others, however, offer skill-and-drill routines of dubious educational value which are unlikely to blend in with existing classroom practice. At £17.50 plus VAT separately several of the programs are grossly overpriced. This is particularly true of those programs which are strikingly similar to software already available often at lower prices.

In fairness to Microspecial, it was probably not the intention to produce original programs in isolation but to be novel in its presentation of this complete package as a resource for developing life skills. How far, then, is the package likely to succeed?

Only a long-term evaluation could fully answer this question. But on initial opinion, having tried the programs with a sample of the sort of pupils it is intended for, is that the package is neither necessary nor sufficient for promoting life skills.

It is not sufficient because many life skills, for example, using a telephone, keeping an address book, paying bills, communicating with others, etc, cannot possibly be covered by it. This is perhaps a statement of the obvious, but a more damning criticism is that a package of this kind hardly seems necessary in developing life skills. Why simulate when the real thing can be developed cheaply, readily and at first-hand? This applies to opening a bank account, handling money, insuring oneself, getting a bus ticket. The databases pupils in this category are more likely to meet include telephone directories, recipe books and the TV Times. Why not *unswitch* in the classroom, or even better *outside* in the playground?

Education, or rather schooling, has in the past been criticized by "radical thinkers" such as Holt and like for providing second-hand information in a surreal context. Aspects of Microspecial and its use of the concept keyboard are likely to perpetuate that criticism. Our thanks are due to the fourth and fifth pupils of King Eborac Comprehensive School, Sheffield who gave helpful comments on these programs.

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NETWORK LOGO for the BBC MICRO

Network LOGO is the only BBC logo that comes on a disc and runs on networks using sideways RAM. Prices start at £100 for a network of two and four manuals - this works out at less than £15 per work station.

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Until recently computer software for purchase was just not an option outside the large commercial mainframe environment, there was no financial incentive to produce and market a product which was bound to be expensive unless a huge customer base could be found. The sudden emergence of the popularity of computer games changed all this and in the last few years fortunes have been won and lost. Inside education software which was available was given away until fairly recently but partly because of MEP's influence and partly because the school book publishers became interested, the trend towards software for purchase is almost complete.

The small, educationally respectable but unexciting programs which were given away "public domain" and largely forgotten. Teachers and children expect commercial gloss in the software as well as sound educational principles. Glossy packaging too is demanded and why not if it is to achieve credibility?



Teachers can be excused for expecting software to go the same way as books but there are some convincing reasons for suggesting that this trend cannot continue. First, software is much more expensive to produce than books. Furthermore, although we are getting cleverer at producing it, the cost of software creation is bound to rise because the user is demanding more and more sophistication. Second, schools expect to buy a single copy of a piece of software but are often prepared to buy books for each child in the class or year.

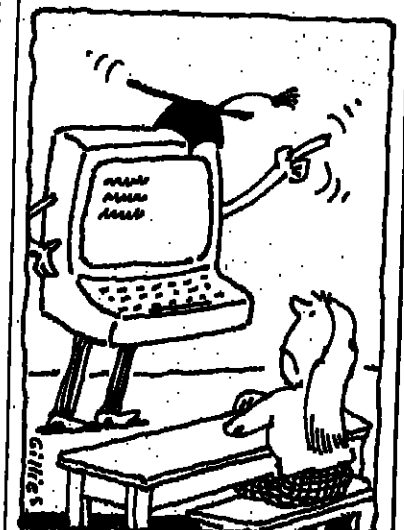
Third, the advent of networks is bad news for publishers. Network software is much more expensive to produce and sales are more modest because the number of networks will always be limited.

Fourth, software maintenance during the lifetime of a product is likely to cost more than the cost of origination. The revenue to meet this cost could come from a renewable software license but it does not. Maintaining software (fixing latent bugs, coping with versioning for new variants of the machine or its operating system, providing new printer options or responding to user requests for more advanced features) is not always as rewarding as its original creation and few professional software writers relish the idea of looking after someone else's badly written software with probably a complete lack of technical support. In any case the book publishers cannot possibly support this kind of exercise on the basis of current sales.

Fifth, software, even with so-called copy-protected disks, is much more vulnerable to copyright infringement, and finally it is difficult to review software quickly even with inspection copies and most publishers are not happy about providing copies on approval.

The Government, through the DTI's latest schools scheme of half price software (offered through i.e.a.s), is probably hoping to raise the quality of software by stimulating the market. It remains to be seen whether the ensuing thirst for quality software is maintained when the funds are withdrawn.

However, before we go any further, perhaps we had better face the question of "what do we mean by quality?" If you had no books to teach with and only five pieces of software, what would you choose? What would you choose if you were playing desert island (diddy) disks? If you were choosing software to reinforce your teaching style where would you look? If you wanted software that was mind-blowing and open ended would you be:



ing than much that is. Small business software will be expensive but if you work at it, the rewards can be great.

Best Buys

It is difficult for me to recommend particular products because I don't know your teaching style, what machine you use or what age your children are. However, I don't think

EXTRA

Desert island disks

The outlook for the continued production of software may not be good, but the DTI's latest scheme offers schools a chance to buy some choice programs. Bill Tagg suggests some guidelines

able to find the time and energy to build its use into your curriculum? If you wanted software that was relevant to your existing curriculum then what would be your criteria? If you wanted reusable software then how would you re-use yourself that it would behave properly?

All these questions are so difficult to answer that it is no wonder that so little money finds its way into software, but Computer Education cannot function without it so read on. Here first are some golden rules for software purchase.

• Perhaps software for your particular educational need does not (or cannot) exist. Don't feel you just have to use computers, there are plenty of more important things in life.

• If you have a genuine need to use a computer, then it is likely that your educational aspirations will change after you have used it for a while. The computer can be so powerful that all kinds of new opportunities start to arise. Only your imagination is the limit with the best software.

• If you are looking for subject specific software, it is bound to be expensive in terms of how often you use it. It is less likely to be open-ended too and you will need a great deal to satisfy your needs. Looking after a large software library requires resources too.

• Open-ended and powerful software is good for you and your students because it does not put artificial barriers on your learning domain or your learning strategy. Open-ended software can more readily be adapted by you to suit your needs and since you certainly know better than the software author what you want to do and how you want to do it, using open-ended software is bound to be more rewarding. However, this style of software is unlikely to be so user-friendly, it has a habit of sitting there and saying "what do you want to do next?" and novices are inclined to feel that it is the computer's job to decide that.

• Do not underestimate your students. The younger they are the better they will cope. Not all of them will be interested in the technology itself however, it is the IT which is important not the T.

• Because the education market is so small, software is bound to be expensive for what it is. If you can find software that is aimed at a bigger market and you are satisfied that it has educational potential then it is likely to be a good buy. You will probably have to spend more time on adapting it to your needs however. The two obvious markets to small business market. I find some home software that is not trying to be educational more convincing.

any secondary school should be without the following list and primary schools will find much to excite them here too. All are capable of keeping a micro red-hot every day. They are not in any particular order:

A paint box program. Ideally, it should be mouse driven. Mice are much better than touch sensitive screens, light-pens or joy-sticks for most applications.

A wordprocessor. Wordprocessors in the hands of children of all ages provide a great many educational opportunities. Older children are using them for straightforward essay writing (although I have heard of cases where they feel obliged to write them out by hand before they are handed in to some teacher, no longer a punishment. For younger children, a word-processor is easier to use than a pencil and makes collaborative writing much easier. It helps to overcome the mismatch between thinking speed and writing speed too.

A problem solver. The most popular these days is Logo and its attraction is not just the opportunities for structuring your thoughts but its versatility through the creation of microworlds.

Of particular interest is the control of the physical environment. Problem-solving which is asking the user to use a mixture of hardware and software strategies is particularly challenging. An information handler and associ-



ated utilities. Remember, however, that you are not just getting this for the school office, the most exciting work I have seen in primary and secondary schools is in this area. Mapping, local history through census data, marriage and death records and classification exercises based on all kinds of data children collect themselves are the popular applications.

A spreadsheet. Simulations, mathematical investigations and the results of science experiments can be enhanced by using a spreadsheet. A 3-D graphics package. Commercial computer aided drawing packages

generally have many potential applications in the school besides technical drawing.

An adventure game generator. This allows the same style of creativity that essay writing does and provides a good deal of motivation. Writing text here demands quality and imagination not quantity and it is ideal for group work. A general-purpose simulator. Children should be encouraged to look at the models and take them to pieces. They should also be able to create their own models in subjects as diverse as science, maths and geography.

A graphing package. So that children can see functional relationships for themselves. A viewpoint package. A local viewpoint in a school providing an internal information service is sensible, involving a wide variety of communication skills and is the best way to involve the whole school.

There is no simple advice here on the best sources. In some cases the right kind of software is rare and in others it is hidden among so much drivel that it cannot be found. When you do find a source of good software, however, stick to it and the general rule of buying your software first and then the hardware to go with it at least demonstrates how much research you have to do.

When you want to browse through software, give yourself plenty of time and when you have bought it, put time into coming to terms with it. Many i.e.a.s have software reference libraries and so do the MEP Regional Centres. If what you have is worthwhile, you can expect to need a month's secondment for each £100 you have spent (but you will not get it).

Bill Tagg is Director of the Advisory Unit for Computer Based Education in Hatfield and is the editor of A Parents Guide to Educational Software published by the Daily Telegraph at £3.95 and available from the Advisory Unit or booksellers.

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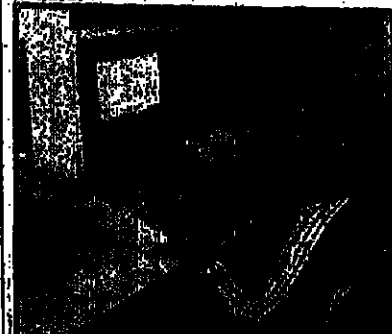
Other delegates criticized the scheme for the opposite reason - for effectively putting purchasing decisions in the hands of i.e.a. advisers rather than teachers. Bill Tagg of Hertfordshire commented on the "patronising attitude" displayed by speakers who thought that advisers were better qualified to decide. He felt that teachers had become much more discriminating in the last few years.

Speakers from i.e.a.s commented on the extent of support that they had to give computer-using teachers, adding considerable hidden costs even if software was apparently "free". An adviser commented that free software usually lay unused in cupboards if issued generally. If offered at nominal cost after an in-service course, it was likely to be used heavily. DTI seemed ready to condone this approach.

Roger Watson, of Longman's Schools Division and the Educational Publishers Council, emphasized the advantages of selling to 120 i.e.a.s rather than 6,000 individual schools. At current prices, it was proving expensive for even the most successful publishers to market their best products in schools.

of Tecmedin argued for a consortium of authorities to work with a group of software and hardware producers on a shared-risk basis.

Significantly, Mr Waller described the DTI scheme as "a precursor to greater dialogue between the suppliers and the authorities". DTI are said to be bringing representatives of both groups together at a high-level meeting later this month. Unless that dialogue is constructive, the UK software market will be in serious peril. In the post-MEP confusion, only Scotland enjoys continuity in its central support, and the Scottish software market is far too small to support commercial publishers.



EXTRA

Research into the use of LOGO is producing conflicting results.
Mike Thorne examines the findings

FORWARD LOGO?

Considerable controversy currently surrounds the use of LOGO in schools. Thus, in the same year we read two directly conflicting research reports. The Chiltern Logo Project - which was school based, using both inner-city and suburban schools - concluded that children can and do explore and encounter powerful ideas of mathematics when using Logo in a helpful environment.

On the other hand, research at Sheffield University, wherein a complete class from a nearby inner city, social priority middle school was busied into the University once a week, warns us that, for these children, Papert's expectations of Logo are too high; that these children find programming more difficult than we are led to expect; that top down problem solving and the attendant notion of procedural thinking is too structured for many such children - even adults - to cope with; and that, worse still, some such children find drawing pictures on a computer screen for the sake of it, not very motivating.

Not that the controversy is new. As long ago as 1969 Feurzig and others taught arithmetic and algebra to 13-year-old children using Logo, with no significant improvement in their mathematics. A decade later, Howe and O'Shea reported similar findings in a study with bottom-stream inde-

pendent school 11 to 12-year-old boys who, nevertheless, showed gains in self confidence and became much keener to enter into mathematical debate with their teachers. Finally, in 1980, came what had been hoped for. A study by Hartley showed significant superiority of his Logo group on all measures of attainment.

But then Leron, Pea and Kurland did work which suggested that some of the ideas of Logo do not come naturally to children, while Helen Finlayson found that children can be competent at Turtle graphics without understanding the underlying mathematics. However, she says, the ability to work with Logo is generally related to other abilities and mental maturity but there is no cut off point, and all children get a lot from it.

Latest of all, Hoyles and co-workers (see facing page) found that there are considerable gains in terms of motivation from the pupils working with Logo on their own goals and that there can be a qualitative development in the pupils' collaborative skills, although pupil pairs need time to learn to work together effectively. They also found that too rapid exposure to different programming control structures can lead to confusion.

None of this variation is peculiar to Logo: similar confusion applies to other brands of Computer Assisted Learning. Indeed, when Roland Lauterbach of the IPN Institute for Science Education in West Germany

was asked by his government to help them decide if there is a case for putting computers into German schools, he conducted a meta-study of CAL research findings since the Sixties. Was there a trend, he wanted to know, for or against CAL as a whole? His conclusion is startling. If you insist on a sufficiently marked improvement in learning due to computers, in order to be sure that the benefits are not merely Hawthorne effect induced, only studies using computers for simulation consistently find in favour of CAL. And even with simulations, the case is not cut and dried. In short, he concludes, research has not found us a proven reason to use computers in classrooms at all, let alone Logo.

On this evidence we might as well use shoe-boxes instead of computers - aye, and there's the rub for those familiar with a well-known exercise in group dynamics. In it, a group of people is given a shoe-box full of what appear to be miscellaneous bits and pieces - a ball of wool, the innards of a clock, some nuts and bolts, a rubber (but no pencil or paper), a small tool for working leather etc etc. The group has to decide what the person who owns the box does for a living. Unbeknown to the group, their tutor has earlier filled the shoe-box with a random collection of junk: the contents of the box is irrelevant, the important matter being the ability of the group to form itself into a unit, to keep the discussion on-task and to be

sufficiently flexible in thinking that a consensus can be reached. Having watched dozens of videos in which their owners claim (perhaps even justifiably), a good Logo lesson is being given or two children are making valuable use of a CAL package, it has often occurred to me how similar this is to the shoe-box exercise. As one's attention is drawn to the extra amount of on-task discussion the micro has stimulated and to the improvement in children's conceptual language and their cooperation toward a common goal, the illusion is completed and one is tempted to think: a BBC shoe-box for every school?

Papert's book has not helped either. Of course, the faithful derive inspiration from it, but his message is obscured by the Messianic quality of his writing. To my mind, it is similar distancing from Papert's obviously exaggerated claims for Logo is essential.

For example, a top-down structured approach to every problem is not possible. We can prove this mathematically. Indeed, it is for this very reason that the GOTO command in BASIC (which, through misuse, is often responsible for much unstructured programming) cannot be dispensed with entirely.

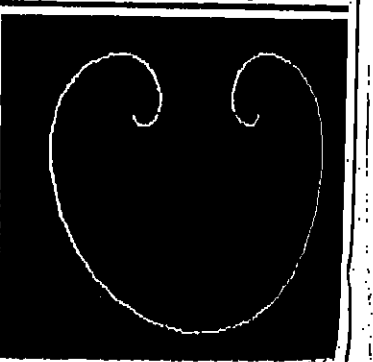
Any reference to Logo being "natural" is also a troupe-rallying slogan. What is natural is at best subjective, at worst not obvious. The set of "natural" numbers in mathematics contains the natural number 0, thanks to an argu-

ment it took mathematicians 3,000 years to resolve.

Programming itself is not easy either. Unfortunately the belief that programming is easy has led some people to assume that Logo can be picked up very quickly.

Possibly the earliest of Papert's challenges to gain widespread negative reaction was that success can come with children using Logo unaided. As a result there is now a whole community investigating ways of moving children to their next discovery in sensitive ways which do not compromise their ability to think for themselves. The book, *Nudges*, by Steve Timp is a beautiful example of this sort of work. Worksheets of the fill-in-the-gap variety can discourage autonomous higher level thinking and thus involve lowering the baby out with the bathwater: surely we can do better than that!

By now, then, the Logo community has, by and large, a much more realistic and logically tenable view of the language's potential. Some teachers seem to be able to find the secret of using it successfully with some children, now. In the long term there remains the distinct possibility that Logo may become an important tool in mathematics education but there is scepticism about Logo in other parts of the curriculum. For the present it seems pointless to look negatively at Logo just because Papert's enthusiasm sets Logo above other styles of CAL.



John McShane and Tony Simon dispute the psychological claims made for LOGO

Hard facts and hype

The Logo programming language was developed by Seymour Papert and his colleagues for a specific purpose: to revolutionize education. The aim was to create a new generation of children who would be "in love with learning".

Logo, or more specifically "turtle graphics", is intended to allow children to concretize abstract concepts such as angle, size, direction and then actively to manipulate those concepts in a dynamic way to allow, according to

Papert, a uniquely easy way of understanding these ideas. Turtle graphics is intended to be an environment in which children encounter and try to solve fundamental problems in maths and geometry while attempting to achieve such simple goals as drawing a house. Papert believes that, as a result of an

interactive relationship, where the computer gives immediate visual feedback about where errors are made (in the form of an ill-constructed shape), children can learn in a meaningful way about concepts in maths and geometry, as well as in many other areas. In many ways these are exciting

developments and those bitten by the bug have not been restrained in their enthusiasm.

The tantalizing world on offer is one in which learning skills blossom and learning difficulties are easily resolved. However, the model of learning that is implicit in these claims and in Papert's book is not one for which there is much support in the psychological literature on mechanisms of learning. It is worth isolating several claims about learning that are being made. Many of these claims have, in fact, already been tested in a variety of other contexts. The results have been sufficiently disappointing to suggest that the advent of LOGO, whatever its benefits, will not have the dramatic effect on learning that its proponents envisage.

One of the many reasons advanced for expecting these dramatic effects is the belief that, as an educational experience, Logo will be more motivating than anything that has preceded it. The argument here is that, because of its implementation on the computer, Logo is a dynamic experience with instant results. Instead of the child experimenting with an idea and then waiting for the teacher to evaluate it, ideas can be instantly evaluated in terms of their effectiveness at achieving the required result.

In his book *Mindstorms* Papert argues that, because children are fed information in educational establishments rather than being active participants in the process, they are being denied the opportunity to develop a deep understanding of the knowledge concerned. As a result, he advocates the "learning-by-doing" approach to education in which children are allowed to discover knowledge for themselves, at their own pace and in ways suited to their own individual style of thinking. This harks back to the "Piaget in the Classroom" movement of the 1960's and 70's which has produced only disappointing results. Self-discovery is not a panacea for classroom boredom nor for learning difficulties, although it has its place in any well-structured curriculum.

Careful comparative studies of knowledge acquired under different conditions of instruction have failed to show any specific or general benefits among children who learned by self-

discovery.

This should not be too surprising, when confronted with a new range of concepts it is very difficult for anyone, child or adult to pick a way through the maze of possible relations among the concepts without some expert guidance. It is precisely the element of expert guidance that self-discovery lacks. Some skills will, of course, be learned by someone relying on self-discovery, but the process will be much slower and the skills no better learned.

It is easy to see why, given all of this, there is little reason to be very optimistic about self-discovery procedures, with Logo or otherwise. Self-discovery procedures may work when the child actually discovers something but discovery cannot be guaranteed.

The important lessons to be learned from the research into mechanisms of learning is that there are many components of the processes of learning and that the advent of LOGO, whatever its benefits, will not have the dramatic effect on learning that its proponents envisage.

By definition the child alone cannot supply this; nor can interactive systems such as Logo provide the type of feedback we have been discussing. All of this suggests that if Logo is going to take its place in the classroom it must do so in a more structured setting than has yet been the case.

We have recently carried out an experiment that illustrates and brings out the points that we have just made. Using a computer program developed by the MEP, which was a game designed to foster problem solving skills, the performance of three groups of 10-year-olds was assessed. All children were initially taught how to play the game and then, while one group was allowed unstructured practice, the two other groups were provided with a similar amount of practice under different conditions of instruction. Both of these groups, in fact, were taught identical strategies designed to improve their understanding of the game.

The critical differences were that for one group, no information regarding why the strategies were effective was provided, while for the other group information was provided as to why the strategies would increase effectiveness at solving the problems. It was this group whose approach was the more orderly and thoughtful, and whose solutions were most error-free when tested on a more difficult version of the game.

continued on next page

Hard facts and hype

continued

task. This pattern was maintained some three weeks later when the children were re-tested.

The results of this experiment are congruent with a body of psychological literature which demonstrates the importance of a structured environment that provides feedback in the learning process. The fact that self-discovery would lead us to predict that it is unlikely, of itself, to be a powerful learning procedure. If it is not supported by an appropriately structured environment it is likely to be, at best, disappointing and, at worst, totally ineffective as a means of teaching children the essential elements of mathematical or scientific reasoning or methods.

However, largely because of the enthusiasm created by Seymour Papert and his vision of Logo's use, it has become almost heretical to suggest that one should actually try to teach children by using Logo in some kind of structured curriculum. What we have attempted to argue is that to fail to do so is the most likely way that Logo's potential will be lost. Such structured environments could take any of a variety of different forms but as an illustrative example we shall refer briefly to one approach developed by a University led by Jime Howe. This system avoids many of the pitfalls of self-discovery by providing worksheets with set goals in which the vital concepts to be taught can be "discovered" by working through the tasks and examples.

Here all children can be assured of at least encountering vital concepts instead of their discovery being left to chance. Furthermore, the system is hierarchical so that older or more advanced learners encounter more complex issues and examples. The essential strategies which enable transitions from one level to another can be provided in many ways but if our results reported above are anything to go by, it would seem sensible to advocate a teaching approach involving the kind of informative feedback which we have emphasized as necessary for meaningful learning. Although comparative studies of different methods have not been forthcoming, we would predict that a system such as that just outlined, being based on empirical evidence on mechanisms of learning, would produce more effective and long-lasting learning than a self-discovery regime.

A further conceptual claim advanced by Papert, which we wish to consider briefly, is that children develop powerful thinking skills, which transcend the particular content over which they are developed, as a result of using Logo. Nowhere is it clear what these skills are, nor how general will be their application, although Papert is not very likely to arise through self-discovery. While active discovery may be a good thing, it needs to be supplemented by relevant feedback process from the environment.

By definition the child alone cannot supply this; nor can interactive systems such as Logo provide the type of feedback we have been discussing. All of this suggests that if Logo is going to take its place in the classroom it must do so in a more structured setting than has yet been the case.

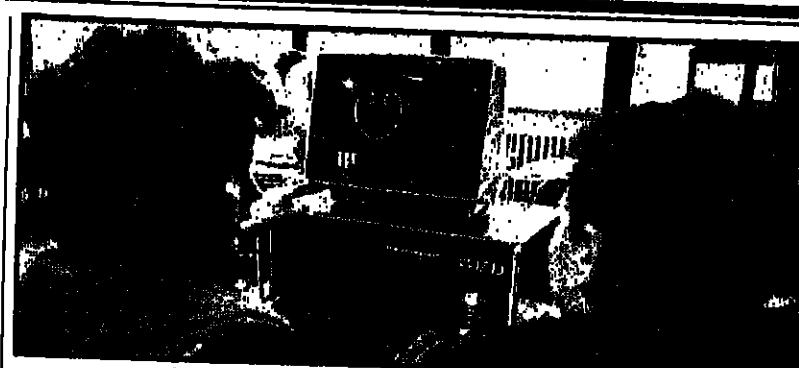
We have recently carried out an experiment that illustrates and brings out the points that we have just made. Using a computer program developed by the MEP, which was a game designed to foster problem solving skills, the performance of three groups of 10-year-olds was assessed. All children were initially taught how to play the game and then, while one group was allowed unstructured practice, the two other groups were provided with a similar amount of practice under different conditions of instruction. Both of these groups, in fact, were taught identical strategies designed to improve their understanding of the game.

The critical differences were that for one group, no information regarding why the strategies were effective was provided, while for the other group information was provided as to why the strategies would increase effectiveness at solving the problems. It was this group whose approach was the more orderly and thoughtful, and whose solutions were most error-free when tested on a more difficult version of the game.

John McShane and Tony Simon are developmental psychologists teaching at the Department of Social Psychology, The London School of Economics.

continued on next page

EXTRA



Open minds

The teacher's role is crucial in the use of LOGO. Celia Hoyles and Rosamund Sutherland suggest strategies

The pictures which pupils draw in direct drive before defining their own procedures are very valuable. They lead to an understanding of the sequential nature in programming. Pupils need to know that each command has an effect before they can understand the more complicated control structures in Logo. Introducing the idea of "playing turtle" to test out commands is the beginning of developing strategies of debugging. When pupils start to build procedures it is very important to encourage them to reflect on what is going on and in particular on the state of the Turtle at the beginning and end of their procedure. Showing them the TRACE command can encourage this.

Similarly printing out the value of a variable when it is used in a procedure emphasizes the processes being carried out. By using metaphors such as the "little people" one also helps children to get a feel for the process by which control is passed in Logo which is a

good basis for understanding recursion later on. We believe that the act of recording on paper also encourages reflection on process. Pupils like to try out their ideas in direct drive before writing a procedure and we have often watched pupils combining together commands (for example RT 90 RT 90 into RT 180) at the stage when they copy their written record into a procedure.

They also use their written record to look for structure in their program design. For example they might notice that a set of commands in their record are identical to those in an already written procedure. We believe that an important and generalizable mathematical activity.

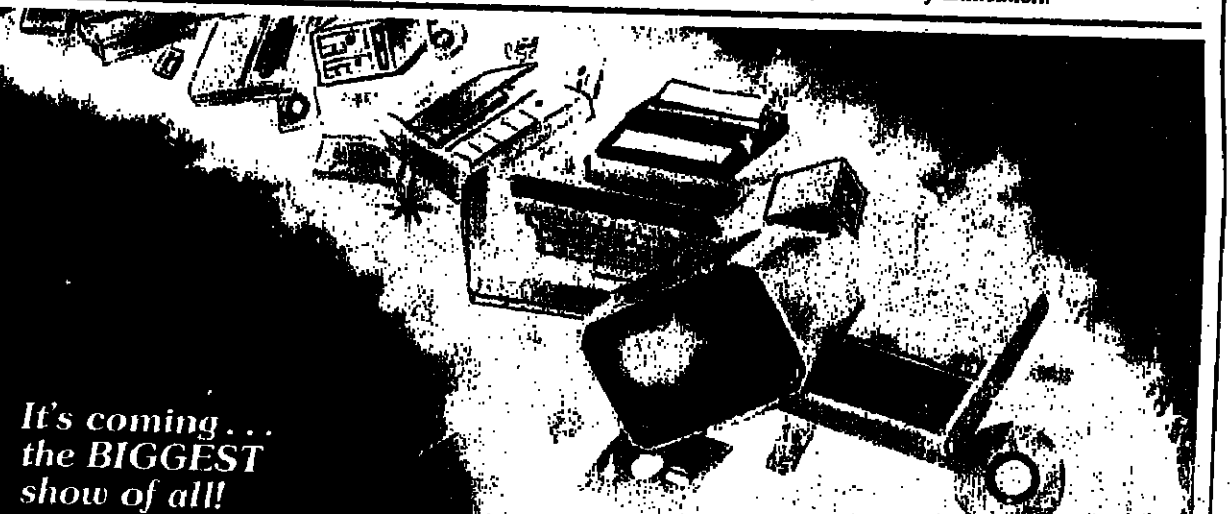
The big question is how does the teacher introduce new powerful ideas such as procedure, variable input and recursion. We believe that it is important for the teacher to try to introduce these new ideas in the context of the

pupils' own projects, that is when the powerful idea enables the pupil to do something meaningful and purposeful. Once introduced the teacher may need to encourage its future use. Simple reminders are all that are needed.

It is possible to predict to a certain extent which types of ideas might provoke which types of ideas. When pupils attempt to draw more abstract mathematical pictures they seem to structure their commands in such a way that ideas like recursion and variable are more naturally introduced. Whereas those pupils working on more realistic representations acquire an understanding of the sequential process within a procedure, develop skills of measurement and also learn for themselves the important strategies of systematic recording and debugging. When pupils have built up their confidence and ability to explore from working on their own goals the teacher may then wish to suggest other types of projects.

We still have a lot to learn about the potential of Logo in the mathematics classroom before being in a hurry to fit it into the existing curriculum. In their LOGO projects pupils' conceptions of fundamental mathematical ideas are being revealed. These together with the procedural perspective on concepts need to be integrated into a coordinated whole... a "new" mathematics curriculum. Let's not organize out the excitement and pupil involvement which is so very apparent. But do let's us make sure the children get the most out of what they are doing. Logo is a new, powerful tool for provoking reflection in pupils. They must learn that they can make sense of the computer feedback themselves without turning to the teacher for help. It is this sort of experience which will produce the problem solvers of the future.

Rosamund Sutherland and Celia Hoyles work in the LOGO Maths Project at the University of London Institute of Education.



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SCHOOL PARTIES

EXTRA

In search of power

Ray Hammond on hardware developments



After three years of promised shake-outs, 1985 has finally seen the long-awaited rationalization of the market for microcomputers in Britain.

The business press has been full of horror stories about bankrupt companies, forced mergers and "collapse" in the market, but, this should not be taken as a true reading of the market. Companies with poor management have suffered as a boom market has hardened, but it is expected that by the end of 1985 sales of personal computers (ie computers costing under £5,000) will only be slightly down on the 1984 figure. What is clear, however, is that sales of "toy" computers (those costing under £500) will be significantly down while sales of more powerful machines will have increased.

The problems encountered by Sinclair and Acorn as they fought to hold their position in a rapidly changing market have been thoroughly reported and their difficulties have left educational purchasers in a quandary over future purchasing decisions.

Until the spring of this year it seemed a safe bet that both the BBC micro and the Sinclair range of machines would continue to be the most widely used machines in Britain's schools and, therefore, remain a reasonable choice for further purchases. In addition a software base which was both widening and improving in quality seemed to further support this decision.

Research Machines deserve an honorable mention at this point. The company is the only microcomputer organisation to have specialized in computers for education and their vigour and excellent support for purchasers has endeared them to many local authorities. The principal problem with RML machines is that they are relatively expensive and they lack the advantage of a high profile in the public market place. As a result they are seen as being almost dedicated to educational use and very few pupils are able to continue their RML work at home on compatible machines: one of the important and unique aspects of micro-based education.

One feature of the changing market is that the category of machines which is referred to as "toys" is no longer as clearly defined as it was. The BBC microcomputer, now being heavily discounted and at last available for around £250 on the open market (still a little above its current market value, I suggest) is most clearly not a toy. It remains a superbly designed and engineered starting point for computer systems which can become almost as powerful as the user could wish.

(although at a high add-on cost). But High Street traders regard the machine with dismay, poor profit margins and falling sales combining to create disaffection, and they are now retailing the BBC alongside such game-playing vehicles as the Sinclair Spectrum.

The pricing of the Sinclair QL at £199 is a much underrated marketing move: the lacklustre response of the computing press suggests that if Sir Clive Sinclair achieved a successful moon landing with a rocket of his own design and manufacture, many commentators would currently consign the news to a bottom paragraph of an inside page.

The Sinclair QL is a very advanced machine which has both the power and capability to outperform many machines which currently sell at ten times its price. This is not fully appreciated.

In the "destroy" phase of the media cycle, attention is currently given to the machine's less than perfect membrane keyboard and to its unconventional, and sometimes slow, Microdrive storage units. The press no longer eulogizes about the four major integrated programs supplied free with the machine and no longer writes with awe of the processing speed of a chip

which is of hybrid 8/16-32-bit design. It is important for institutional purchasers to realise that the bugs in the QL have now been ironed out and the machine represents superb value for money which is likely to remain unequalled for the next year or so (a very long time in microcomputing).

The principal drawback to the machine is that there is still very little quality educational software available for it - partly as a result of the media campaign to stamp on that which they have created. For this reason, the QL is a machine which would be perfectly at home in Computer Studies, but which would be almost useless when used as a tool to aid the teaching in more general subjects (unless a teacher were prepared to write programs specifically for it).

It is not possible to predict what is going to happen to Acorn and the BBC micro. Despite rapid technological advances in the design of other machines, the BBC still retains sufficient power and flexibility to justify enthusiasm, but I can no longer be so sure about the security of its manufacture.

Since Olivetti purchased Acorn at the beginning of this year, the company has failed to solve its problems in

a most singular way. In theory, Olivetti's arrival meant bad news for Acorn's existing shareholders, but very good news for BBC and Electron owners: the future support of the technology seemed certain.

A second cash crisis at Acorn announced during the summer indicated this was not so. Acorn had failed to repair a badly-built management structure and previous marketing errors continued. Olivetti have not indicated what their future policy with the company will be and, in view of the relative sizes of the organisations, it is not inconceivable that Olivetti could just close Acorn, scrap the BBC and Electron and cut its losses. So far about £15 million has been pumped in. Such a move would seriously hinder hardware support.

The BBC micro user-base, both inside and outside of education, is vast and the machine's devotees are, perhaps, the most vehement and loyal of any group. For this reason the take-over of this market by another operator is also a possibility. The user-base is sufficient to ensure that service, software and support will continue to be available from some source for at least a couple of years, but for any institution considering the purchase of machines for the long-term, the BBC is no longer a viable option.

What, then, are the best options for educationalists keen to purchase computing resources with the maximum useful life? It may seem surprising, but I suspect the little Sinclair Spectrum plus (now available in the High Street for around £99) will continue to be a very popular micro. Sinclair's cash problems this year were definitely aggravated by the complete failure of Sir Clive's electric car (even though that was built by a legally separate company) and Sinclair's inability to juggle cash within the organisation squeezed the bank accounts at a bad time. Despite this, Sinclair's smallest machine remains popular and very profitable.

The latest news is that the company has launched a 128K version of the Spectrum (the RAM switchable in banks rather than wholly addressable) and this version is being made available first in Spain, a country which has proved an excellent market for Sinclair. The company says there are no plans to release the 128K Spectrum in Britain before 1986 and in that snub it is possible to see a personal reaction to a market which has proved itself extremely fickle.

European markets are currently soaking up most of Sinclair's stockpile of machines and the vast user-base of Spectrums (by far the largest of any one machine in the UK) and the much-heralded Spectrum portable will ensure a continuity of service and software for this machine. For primary education purposes the machine remains a sensible and economic purchase.

Further up the price/power scale the decision about which machine to buy for which purpose is exceedingly complex. The British company, Apricot, spent the first half of this year boasting

about how it had succeeded in maintaining increases in turnover and profitability and, in a rush of enthusiasm, reduced the price of their 128K disk drive and monitor) in a bid to capture the educational market they believed Acorn was losing.

This autumn, however, has seen a shamed Apricot talking about "reduced" profits and stockpiles of unsold machines. There have been contradictory statements by the MD and chairman of the company, one of whom indicated that they intended to push further into "low end" personal computing while the other said that the company had made a mistake in doing for the cheap end and would henceforth be transferring its attention to the higher end of the business market.

It should be said that unlike Sinclair and Acorn, Apricot is not a company which has sprung up on the back of the microcomputing boom. The company was established 20 years ago in Birmingham by a chartered accountant who offered computer bureau services to commerce and industry.

It is true to say, however, that the most startling surge in the company's growth to an organisation with a turnover of £92 million occurred after its successful launch of the Apricot microcomputers.

For educational purchasers an Apricot remains something of an eccentric choice. The "e" in the designation, stands for "educator" and the machine offers a lot of power at a reasonable price. The machine, in fact, a truncated version of Apricot's business micros. These are "semi-compatible" to the now well-established IBM standard. Apricot chairman Roger Foster admits to standing on IBM's shoulder with his marketing philosophy.

Semi-compatible means that IBM software has to be converted before it will run on Apricot machines and, although there are now thousands of programs available off the shelf for Apricot, most of these are for business or special applications and are relatively few educational programs available.

The phrase "IBM compatible" has become the key to success for the business micro market and only Apple held out against the giant in the micro marketplace. Apple announced huge reductions in the price of Apple computers for educational buyers earlier this year, but so far few schools or local authorities seem to have been tempted by this offer.

In the High Street Apple have just slashed their prices on the Macintosh range, reducing the price of the most powerful machine - the 512K - by £300. Other price cuts in machines in the Apple II range indicate that the company is struggling to maintain market share.

If the BBC micro has provided the educational standard for computing over the last three years, it now seems as though the IBM standard, originally designed for business, may intrude down into secondary education. The reason is that the price of IBM machines is falling so rapidly that systems of the type formerly unaffordable by commerce are now in reach of schools.

By the end of this year it will be possible to buy a 128K machine with single disk drive, a colour monitor and full interface sockets for £675. At the moment the entry level to IBM standard computing is just below £1,000 and an area inhabited by machines such as Tandy's Model 1000. The new price breakthrough is being offered by a company called IMC, an organisation based in the Far East which has been selling its IBM clone computers in USA for the past year. The range of machines will be marketed in Britain by People Logic, a London company previously known for selling software on computer parts.

The IMC range will extend up to a machine which offers 640K RAM and a 10 megabyte hard disk for £1,451 at a price which is currently below IBM's least expensive 128K PC. This new floor for the market is bound to force other manufacturers to further reduce their prices and IBM-style machines must now be considered as the most attractive option for secondary education. Continuity of software support is confirmed. There are so many IBM machines and compatibles in the market place that this is a situation which can be guaranteed for at least ten years and probably for ten. Apple's IBM-compatible machine is a

EXTRA

In Quest of...

John Levett on data handling in the primary school

The Hertfordbury Project was set up in January, 1984 to run for two years. Its aim was to look into the ways in which children of primary age use software for handling information and to discover how this type of activity influenced the primary classroom. The key software used was QUEST and this was not coincidental. Quest was developed by the AUCBE at Hatfield and was the only information retrieval program of its type available to UK schools for both BBC and RML machines.

The important phrase here is "of its type". Quest is a command style program using a precise QUERY language; which means simply that the user is not presented with a menu of options but is required to inform the program of requirements according to commands recognized by the program. Thus, the user does not have to enter into a dialogue or pass through a series of sequences that might be time-wasting and unnecessary and has greater control over the way in which the program is used. That is the theory, but is it true in practice?

Within the project Quest has been used throughout the full Junior age range; but stage, not age, is the governing factor. The reason for this is that young children will experience two conceptual problems: finding "concrete" representations of information contained in a file and

stored on a disk and of the command language. There are many interesting points to be noted here about "mental manipulation" of data: one might consider how children have approached the activity.

The first files that children encounter are, generally, files they have compiled themselves and of restricted size. Such files serve many purposes: familiarity with the data, they are able to determine general or specific questions, during collection, which the file might satisfy and they can develop a concept of the totality of the data. Children do not require to learn the full command language.

Pupils are able to create and interrogate files of the above type with only a limited subset of the language which later acts as a tool for the child to familiarize himself or herself with larger and/or impersonal files. They appropriate those elements of the language (and program) for which they can devise their own metaphors and the subject is enlarged once new requirements arise.

There is no evidence that a child's familiarity with menu-driven programs enhances facility at a later stage with command style software. Nor is there evidence that the introduction of data handling through interrogation, against collection, of data allows for the development of more effective strategies for the child.

Looking at children's strategies is important, but the dominant question is: what is the point of it all?

The types of activity for which children and teachers have adopted this approach fall into clear categories: survey, scientific, personal, observational, primary source. Such activities have arisen in two ways; as projects incorporated within classroom activities and as projects initiated by virtue of the facilities offered by the computer program. A few observations are appropriate here:

- Children develop an appreciation of source material;
- This validation develops first from their own observations of personally collected data and is extended to considering existing (primary source)

data;

- Children develop an appreciation of the validity of sampling data and of consistency of data derived from different sources;
- Children are capable of establishing hypotheses and of incorporating new data to support initial investigations; equally they are capable of interpreting results as negative;
- Children develop a facility for handling "elusive" data;
- Children code information and are required to select the most appropriate information to satisfy an inquiry.

This has not been a comparative study between computer and non-computer groups engaged in the same activity, nor would such a study be possible. The crucial point is that a range of activities has been opened-up for young children that previously would have been unmanageable: configuring the information in a variety of ways, editing it with ease, selecting any combination of characteristics from it, and presenting results in a variety of formats is difficult if not impossible without a computer.

The development of library/information study skills is a part of the Primary curriculum and it is appropriate to consider the relationship between these and computer information handling. Certain skills are prerequisites for computer handling (eg the use of appropriate reading skills, the ability to classify information according to valid criteria and recognise that the same things might be classified in different ways). Others can be developed as easily through computer handling and are transferable to non-computer activity (eg proposing ways of collecting information, checking the accuracy of information). Many teachers considered that adopting this approach emphasized the need for a school policy on library/information skills.

Teaching style influences the initiation of investigations and the nature of inquiries made. Thus, files are capable of satisfying any number of inquiries or skills their validity is directly influenced by the stage-related ability of the child to pursue them; it is the child who validates the activity. As one teacher commented: "It's no good being interested in the pheasant on the other side of the field when you're treading on the ant that the child is interested in."

John Levett is Project Co-ordinator, The Hertfordbury Project: Advisory Unit for Computer-Based Education, Hatfield.

Power continued

course, RML's Nimbus, which is being directed mainly at schools and colleges.

The quality of after-sales service will depend on the nature of the company offering the hardware. The most secure is certainly IBM, the least secure are the small unknown companies without any track record in the market place.

There are at least two wild cards in the pack of options available to micro buyers: these are the Atari 520ST and the Commodore Amiga. There is a certain irony in these two companies battling it out for the non-IBM and Apple market: the battle is effectively one man's fight against his former incarnation.

The boss of Atari is Jack Tramiel, the man who built up Commodore over a 20 year period. While at Commodore he purchased the design team called Amiga and funded them to produce what he then described as a "revolutionary" personal computer. After that was in hand, Tramiel fell out with his partners and, following a boardroom coup, left and scooped up the ailing Atari computer company with which to do fight against his former organisation.

Jack Tramiel's Atari answer to the Amiga (which is too powerful for the needs of most schools) is to rush-launch the Atari 520ST, a machine which also appears to offer stunning abilities at a very low cost. The 520ST is full colour, has mouse control, offers the GEM emulation of the Macintosh "easy to use" operating system and, of great interest to educationalists, offers a superb version of Logo (complete with Sprites) bundled within the £500 price.

The Amiga will be more expensive and is likely to sell for around £1,000. From American reports the machine does appear to provide the revolution Tramiel promised two years ago. It is a 32/16 bit machine which is multitasking (it can run several programs at once and can be used by several different users simultaneously without the others being aware of it), it is ten times as fast in terms of pure processing speed as an Apple Macintosh and it offers full colour, windows and mouse control. Although initially launched with a maximum RAM of 512K, the machine has the potential to address up to 48 megabytes of RAM.

Educational purchasers may consider the Atari 520ST an attractive machine because of its superb Logo and its considerable potential. There is not much third party software available and this is likely to remain the situation for some time. It must also be said that Atari itself cannot yet be considered a blue chip organisation.

There is no simple solution to the difficult question of which system to purchase. The Sinclair Spectrum is inexpensive and reasonably safe, the BBC micro is getting cheaper but has an uncertain future, IBM compatibles are now within reach of secondary schools and "serious" computing has now become a possibility.

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EXTRA

Powerful PROLOG

by Jon Nichol, Jackie Dean and Jonathan Briggs

In 1982 the government's Alvey Report on Advanced Information Technology threw down a challenge to the educational computing community. Alvey was magisterially dismissive of current practice in teaching pupils computing, and said of computer education for Britain's Information Technology future: "Action must start in the schools... it is no good just providing schools with microcomputers. This will merely produce a generation of poor BASIC programmers... Teachers must be properly trained, and the languages chosen with an eye to the future".

The Alvey Report was a response to the Japanese Fifth Generation computing proposal on the development of computing in the 1980s and 1990s. As one of their major starting points the Japanese had adopted the Artificial Intelligence research computer language PROLOG.

Prolog, based upon a radical departure from traditional approaches to computing, for it can be used in a declarative as well as a procedural way. A declarative program consists of discrete blocks of information. Such information can be used to describe a "state of the world". For example, we can use it to describe a person. Four statements about John might read:

John is fair
John has brown eyes
John wears a ring
John likes Mary

Prolog's power comes from the application of logical rules to separate blocks of data. For example, we can write a rule which says:

Mary likes someone if someone is fair

The computer can then tell us whom Mary likes and whether Mary likes John. Rules can be infinite in number and complexity, and can be inter-linked and inter-locked.

Prolog can be applied to data in any form, and can search within blocks of data for individual elements. Thus it can both handle information in separate homogeneous units and process facts which appear in the form of consistently patterned lists. Rules can sort, order and correlate elements to the database. Rules give the computer a capacity to reason logically. Prolog also has a query-the-user facility which enables the computer to ask questions and build up a database from the user's answers.

In turn, the computer can explain its steps in producing an answer to user questions. Thus Prolog has an interactive capacity, which enables it and its user to carry on a dialogue. The interactive facility has its fullest expression in the production of expert

systems. Potentially, using Prolog, we have a reasoning machine which we can apply widely to problem solving in education. What is required is for the subject experts within a knowledge domain, and its sub-domains, to specify the structures of the logical reasoning involved for the logic programmer to produce the domain-specific authoring programs.

Prolog's education promise arises from its harnessing logical reasoning to the computer's ability to process infinite amounts of information in its memory. Logical reasoning is only a small subset of the complex and mysterious process of thinking involved in children's intellectual development.

It was through the Logic as a Computer Language for Children Project that the School of Education, at the University of Exeter became involved in the application of Prolog to a major teaching subject, history.

Since December 1982 a small-scale research and development project - The Prolog Education Group - has been running at Exeter, to meet the challenge which Alvey posed to British educational CAL developers. Initially our project concentrated upon the



teaching of history to 11-14 year-old children. The project has become more widely involved in the teaching of Humanities subjects, training and in-service work.

Throughout, the project has depended upon the support of Professor Kowalski's logic programming team at Imperial College, London, for both the provision of the language, Prolog, and the expertise required to translate teaching ideas into computing practice.

Why history teaching? During the past decade there has been a radical revision of approaches to the teaching of history in schools, changes, generally called the "new history". This sees pupils' historical learning and understanding as arising from their involvement in the historical process of inquiry.

With teacher help the pupils have to formulate, refine and resolve historical questions through the processing of historical evidence. The New History's success is most strikingly manifested in The Schools Council 13-16 History Project, which has had an uptake in over half of England's secondary schools. History teaching's concern with knowledge representation and the "modelling" of information mirrored many of the preoccupations of Artificial Intelligence and logic programming research, and it has therefore been relatively easy to apply logic programming ideas and techniques to an element of history pedagogy.

From December 1982 the Prolog Education Group has adopted a bottom-up approach to curricular development. It has developed its teaching ideas and materials in a single 11-18 mixed comprehensive. Each year the project team: director, full-time research assistant and part-time computer scientist, develop curriculum materials and teaching approaches to match the syllabuses for a range of classes.

In our first fully funded year, from September 1984, we began the regular teaching of two third year forms, a second year form and a group of dyslexic children for their weekly one hour lessons. The teaching was class-based, using a single computer and three VDUs.

The key concept developed was that pupils should write their own programs as a means of developing their historical understanding and knowledge.

Prolog's chief problem had been its inaccessibility. Raw Prolog is as user-friendly and as attractive as a tarantula, indeed, it is positively user-lethal. A major concern of the project team has been to make computers and computer programming more accessible to pupils and teachers alike. Luckily we can do this by writing "front-end" programs which act as an interface between raw Prolog and inexperienced users to enable them to write their own programs in a form of natural English.

By February 1985 we had made a major conceptual breakthrough in the development of a series of Prolog front-end authoring programs, each based on our overview of the discipline and its teaching. The authoring programs (or "toolkits") gave the pupils a tool with which they could explore an historical topic, writing their own programs to do so.

The design of each authoring program enables users to concentrate on the structure, content and aims of programs they create, without having first to master complex programming techniques. Such toolkits provide logically-structured building blocks with



which teachers and pupils can construct sophisticated and successful software.

Micro Prolog has two large, general purpose front ends: SIMPLE and MITSU. These are suitable for those who wish to learn something about logic programming. The latter project's authoring toolkits, however, reflect a modular approach, each a compact, specific-purpose program. This formula suits the realities of school micros with their inadequate memory space.

From February 1985 we extracted a small group of six second-year pupils from our main form to use toolkits, and also used them with our group of four dyslexic pupils. At Easter we used the toolkits on an intensive one week course for gifted pupils in Somerset, during which they wrote a number of programs. By June we had produced a sufficient range of authoring programs to make them the central feature of our annual conference, held on 24-25 June at the School of Education, University of Exeter.

We have now produced toolkits in three main areas of history teaching: enquiry or detective work, consultation and the mental simulation of historical situations. A fourth area, access to expert knowledge, is represented by APES, a commercial package. Each toolkit allows pupils to write their own programs without any formal knowledge of computing. All they have to do is to pose an historical question, research the historical topic it relates to, and organise and structure the information into an appropriate form for entering into the computer. The programming is the pupils' representation of their knowledge. Information on the toolkits is given in the table below.

We are now able to issue our materials for testing and evaluation to interested centres. The project is willing to work with groups of schools, i.e.s., CAL development projects and similar organizations. The project has also provisionally arranged to field-test its materials in state and national education centres in Austria, Australia, Bulgaria, Chile, Denmark and Norway.

If you would like any further information, please contact us at The Exeter Project Group - the Exeter Project, c/o Dr Jon Nichol, School of Education, University of Exeter, Exeter, England, EX1 2LI.

Jon Nichol, Jackie Dean and Jonathan Briggs work for the PEG - The Exeter Project.

AREA	AUTHORING PROGRAM	TABLE
Historical enquiry	DETECT	For handling discrete blocks of text, accessed through key subject words. DETECT allows the discovery, questioning and processing of evidence, the framing of new questions and the formulation and testing of hypotheses. Example Program GRIFFIN - a murder mystery based on Collingwood's John Doe investigation. BOGBOY - an investigation into an Iron-age body found in a peat-bog, based on the Schools Council History 13-16 Project Tollund Man investigation. MOUNDG - an archaeological dig into a Viking burial mound on the Isle of Man.
	PLACES	For processing information which appears in the form of coherently structured lists of data: in this case place-name information. Example Program CREDLAC - an investigation into local place names around our project school.
Mental recreation	THE PLAN	An adventure-writing toolkit. It allows pupils to create their own imaginary world, or reassemble historical reality, inside the micro, which they can then explore.
Causation	SIMPLAY	For writing simulations or other programs involving decision-making and a branching structure of enquiry, for example, the classification of information as in the identification of types of historical evidence. Example Program SEADOG - the recreation of an Elizabethan privateering voyage to the Spanish Main.
Expert	APES	This program enables us to write "knowledge programs" which contain the knowledge of an expert. Such programs can interrogate the user and respond to the user's questions. The user can add information to the program, and this can be available to the expert system available only on 16-bit micros, from Logic Programming Associates.

EXTRA

Profiles and practice

Brian Samways on the Modular IT Scheme for Teachers and Trainers

ment" of a set of objectives is sufficient.

Another example is in teaching and learning about databases. How much better it is for our candidate to be given the task of creating and using a useful system rather than being taught each facility of the database package in turn. Designing an information retrieval system for "houses for sale" in the locality or the results of the local badminton league, should give purpose to the task and motivation.

In just the same way these ideas can be transferred to the education of our pupils and students. With such an approach with our teachers/trainers it is possible that similar changes will filter through into the class and training room.

Each module of the scheme consists of just one profile sentence (based on assessment objectives) which states a competency involved in the study and use of Information Technology. By showing that they have achieved the objectives associated with the particular profile sentence candidates qualify

for that module and in this way they assemble their Diplomas.

The profile is built up in the form of a Log Book through which candidates can record their achievements as and when they are obtained. Certification of as many or as few profile sentences as required is available at any time from the RSA. Whereas a minimum of 22 modules have to be achieved for the award of the Diploma, certification is available in the form of a Certificate in Information Technology for the nine compulsory modules and a Memorandum for less. Thus no achievement need go unrecorded and each form of certification lists the actual profile sentences achieved.

The RSA Notes for Guidance contain 12 model assignments demonstrating the way in which assignments offer evidence of competence. Also listed are the possible assessment objectives of the scheme which the twelve might cover but this is only a guide as different candidates could achieve different objectives with similar assignments.

Practical demonstration is of two types. One is a presentation to fellow-

candidates to gain immediate credit for existing skills and experience though it is up to the candidates themselves to produce the necessary convincing evidence. Such a system also allows different types of Centre to work together - for example, one offering just the Certificate in Information Technology, through, for example, a series of short courses, and the other offering a full Diploma.

Candidates may achieve the assessment objectives in three ways; through a set of assignments, by practical demonstration and by completing set tasks.

The RSA Notes for Guidance contain 12 model assignments demonstrating the way in which assignments offer evidence of competence. Also listed are the possible assessment objectives of the scheme which the twelve might cover but this is only a guide as different candidates could achieve different objectives with similar assignments.

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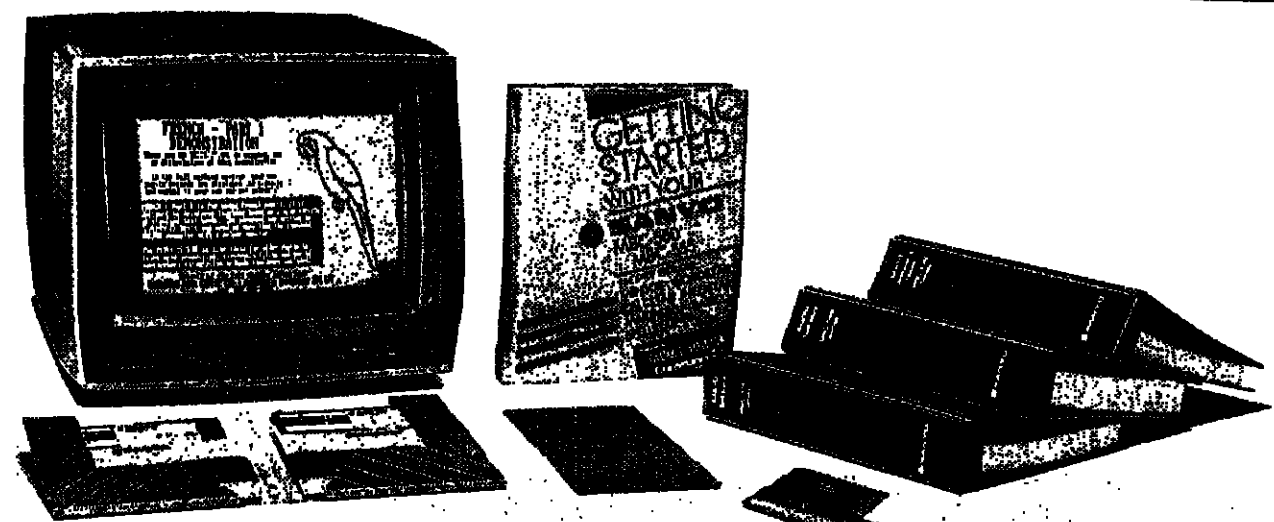
course members or to their own pupils/students whereas the other is a triangulation method. In the latter, two candidates team up and each gives a lesson to their own pupils/students while being observed by the other. Both candidates then prepare two reports, one on the session they gave and one on the session they observed.

In the case of certain Diplomas it is necessary for "content" to be assessed and this will be achieved with a set task.

At present this new scheme is being run as a "development pilot" at six centres in the United Kingdom. The Centres involved, (North-east, North-west, Midlands and three in London), are each covering different parts of the scheme leading to various Diplomas. Depending upon their success and the approval of the RSA Examinations Board it is hoped to offer the scheme nationally from September 1986 onwards.

Details of the scheme together with a full list of the profile sentences are available from the RSA. For your own copy please send a stamped addressed envelope (A5 size) to Susan Unwin, RSA, 8 John Adam Street, Adelphi, London WC2N 6EZ.

Brian Samways is Director of the Birmingham Educational Computing Centre (BECC) currently seconded as Research Officer to the Royal Society of Arts to develop the Modular IT Scheme for Teachers and Trainers.



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S.O.F.T.W.A.R.E.N.E.W.S.

October 1985

STORMSHIP... EMERALD OF THE CAVE... GHOST TRAIN... THE TIME MACHINE

Adventure stories are exciting to read and fun to write. Storywriter encourages young writers to use their imagination and explore their use of language. Once written, children can create their own library of stories for their friends to read.

Stormship etc. are adventure stories written during English lessons at Marshland High School, West Norfolk. Teacher Nick Austin reports:

"Writing stories for Storywriter gives children the opportunity to structure their work and become aware of the complexities of plot development."

Other teachers use Storywriter to record stories of

fact, such as 'a trip to London' or to practise skills, like 'using a phone'. Whatever your preference Storywriter can be used with children of all abilities and across the curriculum in Primary and Secondary schools.

Children usually work in groups to discuss ideas and suggest alternative outcomes to the adventure.

The program provides the structure for stories of up to 50 pages. Each page leads to the next or to different parts of the story.

If you prefer, you can write stories for your children asking them to make decisions, think logically and predict outcomes. Storyteller provides the reading age of all stories on completion. Storywriter costs £11.00 on disc and tape.

MATHS SOFTWARE FOR SCHOOLS TV

Now being broadcast for its second year the Junior Maths TV series continues to be a national success for Central TV.



Fred Harris and Mary Waterhouse present Central TV's Junior Maths

Junior Maths demonstrates how powerful and effective the micro can be in maths teaching. Twelve programs have been developed by BARO to support the series. This new software offers practical ideas which will be of use to all teachers independently of the series. They are available on two discs from ESM.

Fred Harris and Mary

Waterhouse present the 15 minute programmes twice a week. Each is thematic offering in service help to extend primary maths beyond traditional number crunching. Ideas for practical number work and geometry include story telling, games and software. The 2 discs each include 6 programs and cost £15.95.

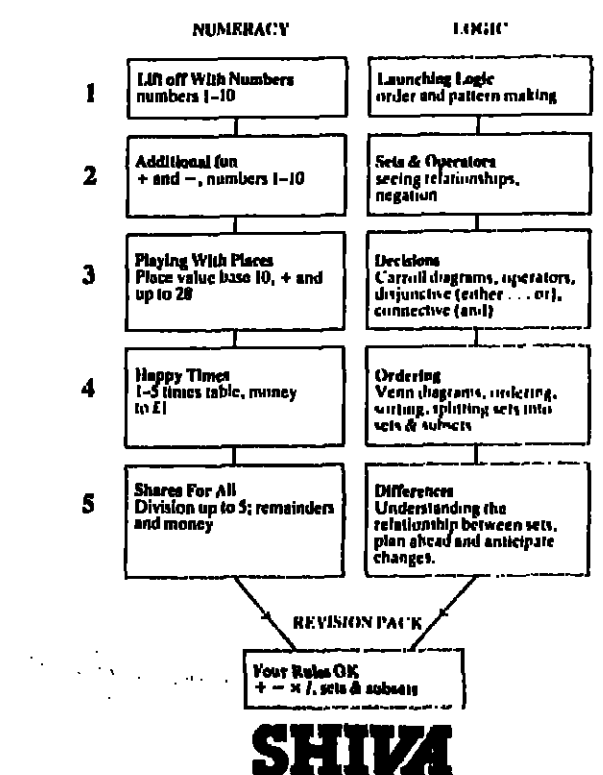
INTEGRATING SOFTWARE WITH YOUR PRIMARY MATHS SCHEME

Iris Hewett, the Primary Maths Adviser for Kent has developed a unique range of software which can be integrated with all existing Primary maths schemes. Shiva's Primary Maths Programme includes 11 numeracy and logic software packs, each developed to an exceptionally high standard.

Each of the software packs contains 5 programs on both disc and tape, and a teachers book. The computer games enable small groups of children to practise their maths skills whilst others are working on similar activities within your class.

The teachers' books guide you through each program and recommend at what point in a child's development the games should be played.

Each book includes ideas of 'How to make your own games' and activities which support the program.



ESM and Iris Hewett have worked together to publish two new titles: 'Shares for all' and 'Four rules, OK'. So, the Primary Maths Programme is now complete.

Viking Raiding Party Pillages Co-op

The adventures of Wulfstan and his Anglo Saxon friends will be discovered by children as they become involved with this new software pack - Wulfstan's Wordboard. Eagerly they will try to help Wulfstan understand their world by communicating with him through reading, writing, discussion and drama.

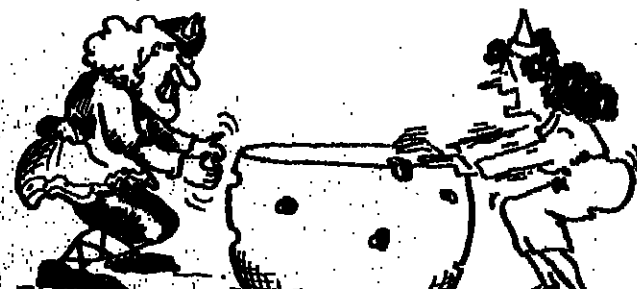
Developed as a project pack by Cheshire Language Centre, it is intended to:

- direct a class project on differences between Anglo Saxon times and present day
- provide for language development
- encourage and sustain enthusiastic discussion
- keep up to 60 pupils busy for a term

Integrate the computer with traditional learning resources

- record pupils progress through a range of writing tasks, such as poems, stories, journeys and descriptions

Wordboard is fun, it blends fact, fiction and fantasy to whatever degree teachers and pupils wish. Through the program pupils encounter a mythical 'Anglo Saxon' Storyteller called Wulfstan who invites them to become his



An illustration taken from "Who taught them to ride motorbikes?"

The project pack contains:

- A colour poster of The Great Hall for the classroom wall.
- A Storybook introducing the theme - "Who Taught Them To Ride Motorbikes?"
- A disc introducing the 3 main language tasks.
- 8 photocopy masters.
- A handbook packed with ideas for the teacher to extend work in areas such as drama, Wulfstan's Wordboard on disc is £17.50.

Ordering Shiva

Each of the 11 software packs contains 5 programs on both disc and tape, and a teachers book. The packs can be bought individually or in sets.

Many schools prefer to buy the complete programme and use £30.00 or Logic 1-5, a Numeracy 1-5 and save £10.00.

Teacher's reports...

"We use the Shiva Primary Mathematics Programme as part of our basic maths scheme and this material is some of the best software produced in young children."

My staff and I am so enthusiastic about the software that the PTA raised the money for a BBC plus all the Shiva software."

The Numeracy programs provide an opportunity for pupils to succeed in a subject which so far they have never really understood or enjoyed.

If the Logic programs are used in conjunction with the worksheets described in the accompanying booklet an excellent course for first or second year secondary children can be followed which will develop logical thinking in a meaningful and fascinating way."

Head of Maths Department (Comprehensive)

Look Before You Leap!

ESM software is available on sale or return. Fill in the order for evaluation the software yourself. Program available on 14 day inspection.

Advisers and computer centres

If you are intending to purchase ESM programs for several schools in your area, then you can save money. For further details contact Young Heald, 32, Bridge Street, Cambridge.

See You At The Fair

Schools Computer & Software Fair '85, 30th-31st October 1985, Camden Centre, Blomfield Street, London NW1. For the third year running ESM software will be at this computer exhibition.

Help For Poor Spellers

Here are two spelling programs which will help poor spellers. Charles Cripps's 'An Eye For Spelling' develops spelling skills through the visual approach, whilst CEC's 'Lingo' uses the auditory approach.

An Eye For Spelling is a rationale and a full breakdown of the 3 word banks. An Eye For Mary Hope, CET National Coordinator for Special needs, explains why it is so good:

"An Eye For Spelling could be described as content free, as new words could be put in by the teacher. But the teaching strategy implicit in the program is that spelling is improved by the look-cover-write-check approach, and this strategy remains whatever words are used. This program is probably one of the best spelling programs available, and meets our preference for content that can be tailored by the teacher."

Report from Mary Friday, a Primary Teacher...

"Having used Lingo for two terms with a class of 6-8 year olds, I have been impressed principally a visual memory with the increase in concentration span of some of the less able readers and words, selected from the spellers, and a generalisation of known writing vocabularies of 5-11 year olds. The handbook my tapes to the childrens gives educational perspectives, written work."

The disc contains 3500 words, selected from the spellers, and a generalisation of known writing vocabularies of 5-11 year olds. The handbook my tapes to the childrens gives educational perspectives, written work."

STORYTELLING WITH MICROSTORY

Given the right opportunity young children are good storytellers and often have tales to tell that are far more complex and certainly more authentic, than the stories they encounter in their reading books.



Good storytelling is not an easy task. It is quite hard to tell a story without any structure at all and one of the most frequent shortcomings of children's stories is a lack of any sense of structure.

Reminiscent of the Victorian party game, Consequences, Microstory is a construction kit for young storytellers. It gives them a supportive framework that guides them to the end of an unfolding story and supplies prompts at different stages so that children have to anticipate those sometimes unanswered questions: eg. Where did it happen?

When? What was she like? What happened next? Who said what?

At the end of the program the computer will run the story, complete with a title page depicting the authors' names but not before the writers have thought of a title and an appropriate moral for their story.

Once users have written a completed Microstory they are then free to restructure it, develop new details or add more individual feeling to the narrative. Microstory costs £11.00 on disc.

Children in nursery and infant schools crowd around a BBC micro, eager to learn and help one another play Colourcopter and other early learning programs games.

The 7 programs reinforce and add to the skills which young children develop through play and family activities. They will enjoy colouring, playing dominoes, reading letters and words, dressing cats with coloured hats and flying a helicopter to build towers of coloured blocks. They chat freely about what they are doing, giving each other directions and suggestions. Adults talk and encourage too, as they and their children learn together.

And what are they learning?

The programs give practise in matching, sorting, hand-eye co-ordination, left to right scanning, letter and word recognition. All are skills which are an excellent preparation for further work in school.

Warmly received by teachers and parents.

Children work at their own level. Everything is introduced in very easy stages, building up confidence by success. An



Children at Homerton Nursery School, Cambridge, learning with Colourcopter.

illustrated book full of ideas for everyday games and activities is included to extend childrens learning.

The pack which contains 7 programs with 27 games has been warmly received by parents and teachers in nursery and infant schools and by

teachers doing remedial or special work. Colourcopter was designed and developed by Robert Harding, a lecturer at Cambridge University and Elizabeth Keate a specialist teacher of the deaf.

Colourcopter and other early learning programs costs £14.85

Another program for nursery and infants in Colour Snap, from ESM at £11.00

CONCEPT KEYBOARD SOFTWARE FOR SPECIAL NEEDS

Young children and those with special needs get a wonderful sense of achievement as they write words, sentences and stories with Sentence Builder.

Sentences are built on the screen by touching symbols, pictures or words on the concept keyboard overlay. For some children, they may be communicating for the first time using a computer. Others are exploring their ability to create more and more complex sentences. You specify the content for word files and overlays, so it is flexible and can be used across the curriculum.

Sentence Builder was originally developed by MEP and has recently been revised to include recommendations of existing users.

Now, up to 100 sentences can be recalled so stories as well as

single sentences can be written. Words can be deleted and added to files, and overall it is easier to use. The booklet also includes more teaching ideas. Sentence Builder costs £12.65.

Existing users

If you are already using Sentence Builder and would like the new disc and handbook please return your original disc plus £6.00.

Further Programs

Pre Reading and Early Reading are two popular suites of programs developed by MACE/MEP. Exercises include odd one out, identical matching, sequencing, memory and recall. Available on disc and tape £12.50.

School Information System

If you would like to give your children the opportunity of creating an in school information system, similar to CeeFax, or writing their own programs for one another then Author is the program you are looking for.

You will also find Author extremely useful, particularly if you are not able to program. It enables you to quickly and easily create your own CAL programs, training programs, workcards, quizzes, etc. You can design screens easily, including colour, teletext graphics, double height characters, flashing characters, lines, boxes and coloured backgrounds. Author is available on disc only at £30.00.

Can You Help? If you are already using Author and have designed any programs which would be of use to other schools, then please let us know. ESM would like to create a library of Author course programs.

GONE FISHING

This fishing trip takes place in the North Sea. Teachers set tasks for children, either in isolation or as added stimulus to project work. Children can travel alone to record and analyse data, or preferably as a group where they can discuss, predict and solve problems together.

Primary children will find Fishy an exciting program for

practising simple calculations and for making accurate recordings. Older children would use the simulation for developing strategies, practising various statistical methods and discussing topics such as conservation. Fishy is available on disc and tape for £10.25

ESM Order Form

Please tick the BBC programs you wish to evaluate. Refund given on any product returned within 14 days.

ESM Programs	Disc 40/80	Shiva/ESM Programs include tape and disc 40/80
An Eye for Spelling	£12.95 ☐	Lift off with numbers £13.00 ☐
Author	£30.00 ☐	Additional fun £13.00 ☐
Colourcopter	£14.85 ☐	Playing with places £13.00 ☐
Colour Snap	£11.00 ☐	Happy times £13.00 ☐
Early Reading	£12.50 ☐	Shares for all £13.00 ☐
Fishy	£10.25 ☐	Numeracy 1, 2, 3, 4, 5 £13.00 ☐
Junior Maths 1	£15.95 ☐	Launching logo £13.00 ☐
Junior Maths 2	£15.95 ☐	Sets & operators £13.00 ☐
Lingo	£10.25 ☐	Decisions £13.00 ☐
Microstory	£11.00 ☐	Ordering £13.00 ☐
Pre Reading	£12.50 ☐	Differences £13.00 ☐
Sentence Builder	£12.65 ☐	Logic 1, 2, 3, 4, 5 £13.00 ☐
Storywriter	£11.00 ☐	Four Rules OK £13.00 ☐
Wulfstan's Wordboard	£17.50 ☐	Number Games book £8.95 ☐
		Complete programme 11 software packs & book £119.95 ☐

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EXTRA

Wordprocessing in education is an emotive topic, especially when its use in primary education is considered. Wordprocessing has been used in business and higher education for over ten years, but it is only within the last two or three years that reliable, easy-to-use wordprocessing systems have become available at a price schools can afford. Microcomputers can, of course, carry out many functions but recent surveys have shown that over 60 per cent of micros sold to the business community are used predominantly for wordprocessing purposes. Of the remaining 40 per cent, many machines are used for wordprocessing for a significant proportion of their working time.

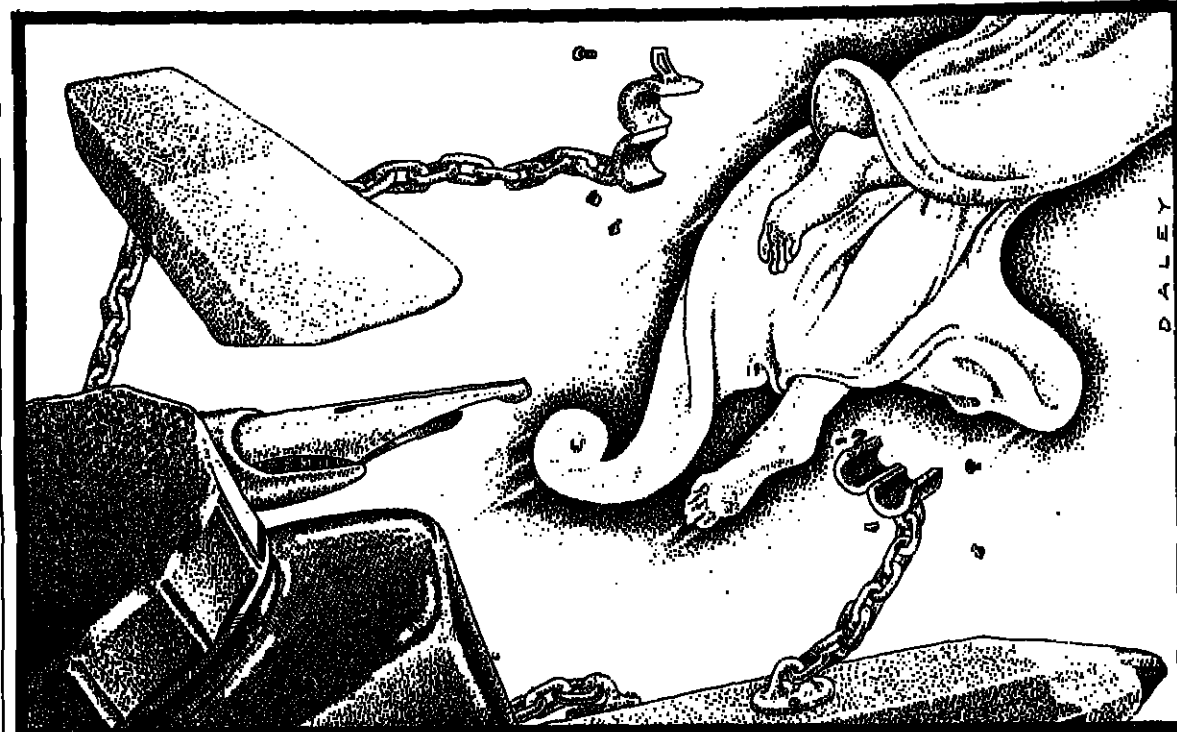
Wordprocessing is essentially an automation of the typing process offering users the opportunity to prepare and edit words on a screen before committing them to paper. Its greatest use so far has been in situations where many similar documents have to be prepared - letters, circulars, etc. - in which the main body of text remains the same but some small details have to be altered for each communication. In the past the solution has been either to duplicate the central core of information and add changes by hand or typewriter, or to type each document individually.

The second main use for wordprocessing has been the enhancement of the creative process of writing where managers and others are able to create reports, letters, etc more freely, altering the text in preparation until the document is in the desired state. Writers have been particularly grateful for the availability of inexpensive wordprocessing and about 30 per cent of professional writers in the UK now make use of such technology. (In the USA the figure is around 50 per cent.)

These two main uses are reflected in the role a wordprocessing system has to play in schools. In the first application there is a clear need for wordprocessing systems for pupils taking business or secretarial studies, although the number of schools actually offering pupils of 16-plus the opportunity of gaining familiarity with office wordprocessing techniques is still small.

Few educators would disagree that wordprocessing systems used in such a context would contribute valuable vocational skills, but many authorities still feel that such training is better provided by secretarial colleges or in specific business studies courses rather than as a general part of the curriculum in the upper forms of secondary schools.

Over the next few years this situation is likely to change (despite the pressure of work for exit qualifica-



Keywords

Ray Hammond on wordprocessing

tions) and increasing numbers of schools are likely to offer some form of wordprocessing training to those in the tertiary stages of their education (boys as well as girls. It is to be hoped).

The main debate is whether the wordprocessor (the term encompasses any microcomputer running a wordprocessing system) has a role to play in the general curriculum and in language studies in particular.

To understand the contribution the wordprocessor could make to the teaching of language skills it is important to understand the implications of using such technology in creative writing.

By the middle-secondary phase of education it is to be hoped that children who are fluent at written English will be in the habit of preparing essays in draft form before writing out a finished version. The problem which afflicts most children (and most adults) is that there is a fatigue barrier which inhibits both the number and the quality of drafts which will be made. Most children perceive the principal

labour of creative writing as being that of the "printing" stage (ie the physical act of writing words on paper) rather than the planning and composition stages. The reluctance to "write it all out again" or to turn in a piece which is covered with deletions and marginal additions means that we are often not enjoying the best imaginative efforts of which our pupils are capable.

Some students have powerful imaginations, are excellent at plot construction and word creation, but find the physical process of arranging their thoughts in a neat and orderly way on paper an almost insurmountable barrier. In some schools these children are still suffering the penalty of our system which demands that the physical ability to print onto paper at a very high standard (good handwriting) is a prerequisite before other (more important) skills can be considered.

The use of a wordprocessor eliminates many of these problems while producing some new ones. Many teachers still feel that wordprocessing is a "lazy" way of writing, akin to the

fear of calculators once held by maths teachers. This is despite the evidence that the use of electronic calculators in no way undermines the need for the logical understanding of mathematics. A second objection is an instinctive feeling that wordprocessing hinders children in the development of the necessary disciplines of careful pre-planning and the ordered commitment of thoughts to paper.

There is no absolute answer to this debate and a mixture of the two disciplines would seem to be the right answer. Teachers who are afraid that wordprocessors will destroy the intellectual discipline required to present a well-written examination paper might consider experimenting by switching between methods with a small group of pupils. (The barrier of low keyboard skills is considered later.)

What has been previously revealed in such experiments is that a small percentage of pupils will gain considerably from the use of wordprocessing (these aforementioned pupils with difficulties in physical presentation), a significant majority will appreciate the labour-saving element but will show no dramatic increase in imaginative power or control of language, and a small percentage will actually suffer from an excess of freedom and find themselves overwriting or abandoning normal editorial control.

Apart from the clear educational need for all children to understand how the majority of written words will be composed in the future, a year's sporadic exposure to wordprocessing will encourage secondary school pupils to reconsider the elements which go into writing and will encourage them to think of the acts of "creation" and "printing" as two unrelated processes which deserve separate consideration.

Having commented on the use of w-p for children fluent in English, it is worth considering the effect such systems can have on pupils with language difficulties. Much has already been written about the power of the microcomputer to help slow learners, but it is worth repeating that the wordprocessor helps to build confidence in children who find it hard to select the correct word or to write in well-constructed sentences. The knowledge that all sentences on the screen are capable of change and rearrangement offers considerable encouragement.

The main barrier for all schoolchildren to successful wordprocessing is the lack of typing skills and few schools are, as yet, teaching typing to all pupils early in the secondary phase. The difficulty of creating computer words (ie against recognizing them) means that until a decade or 15 years ago most children now at school type if they are to use and manipulate information in any way in their future careers.

There are, of course, many excellent

typing tutors available for use with microcomputers and these can train a child in the rudiments of typing within a few hours, but only practice will take a child's skill to the point where he or she is able to use the keyboard as a medium of expression rather than suffer it as a barrier.

Whether or not a particular school or class teacher considers the learning of this additional skill worthwhile will depend totally upon the teacher's belief in the value of wordprocessing and the role of the computer in the world which pupils will enter. Another vital factor is the level of computing resources available to the pupils.

Many primary schools are opposed to the introduction of wordprocessing for children under 11. They fear that the essential skill of handwriting will be neglected and they also fear that some indefinable change in the way children think about the composition of English will take place.

I believe they are right on both counts, but I do think wordprocessing has a place in the primary school classroom. It is vital that children develop handwriting to the point where it becomes a fluid, "transparent" means of communication, but the freedom the wordprocessor has to offer can hasten an even more important gift: it can actually change (for the better) the way children think about written communication.

Educational psychologists are becoming increasingly excited about the wordprocessor's ability to affect young children's thought processes. J Dale Burnett of Queens University, Ontario, asks:

"Imagine now the possible effect on a child who starts writing on a wordprocessor from the age of seven. What will be that child's attitude to writing? How will she feel when her stories appear perfectly printed? If revision is automatic, how will she regard a first draft? What is the impact of her knowledge that she can go back and restructure the first paragraph, or move events around within her story? How will this affect 'writer's block'?"

Will she ever regard a story as 'finished' when she can so easily go back to it with her teacher's comments ringing in her ears?

A few keystrokes and the composition is rearranged to take account of these suggestions. When she is an adult, how will her attitude to writing differ from that of a child taught to write without the freedom of a wordprocessor?

"Will schools continue to insist on developing a child's hand? Most importantly, how will that child come to view the task of writing when the labour is taken out and the ability to develop thought and creativity enhanced? It is unlikely that she will grow up to be like the vast majority of today's adult population who find the idea of writing more than a few sentences an appalling prospect."

Whatever view is reached by individual schools and teachers the introduction of wordprocessing to the classroom will continue to be a gradual affair with economics governing the rate of change. There are many wordprocessing programs available for the BBC micro, the Sinclair Spectrum and RML machines.

Best known programs for the BBC are View, Editor and The Word. Although the excellent Bank Street Writer, developed specially for educational use by Bank Street College, New York, is now also available.

Wordprocessing programs for the Spectrum are many and varied with Tassword being the most popular and RML machines are capable of running a wide range of programs developed for business use.

It is important to remember that wordprocessing demands the addition of an expensive but vital piece of equipment to a computer system: a printer. This will cost at least as much as the computer itself and is considerably more expensive. For this reason a new micro system launched by the British company Amstrad may interest those schools who come to the conclusion that wordprocessing is too important to leave out of the classroom. The Amstrad PCW8256 costs £399 (excluding VAT) and was developed specifically for wordprocessing. The system includes a reasonable quality printer, plus all necessary software and, in an ideal world, would hasten the day when all children have access to a well of fluid words.

Ray Hammond is the author of The Writer and the Word Processor, published by Coronet at £4.95.

EXTRA

Copying right

Geoff Crabb finds that the law is still ambiguous on the subject of copying programs

There have been two significant developments towards a reform of our copyright legislation in 1985. In March there was the Green Paper with proposals for a levy on blank tape and, on September 16, the Copyright (Computer Software) Amendment Act 1985 came into force. This, the result of a Private Member's Bill and "sponsored" by the Federation Against Software Theft, shows what a pressure group, a sympathetic MP, a supportive Government and a largely disinterested Parliament can achieve in the space of a few months.

The Amendment Act (referred to as the Amendment) provides that computer programs are to be protected as literary works under the terms of the 1956 Copyright Act (the Act hereafter). This Act does not mention programs and although attempts had been made to convince the courts that they were protected as literary works, the results were inconclusive.

The Amendment removes this uncertainty but will lead to a number of uncertainties of interpretation. For example, although the original Bill included a definition of "program" this is missing from the Amendment which gives no guidance whatever as to what constitutes a program. Nor is there any definition of the first owner of the copyright, so, as in the case with a literary work under the Act, this will be the author or the author's employer if the program is produced as part of the duties of an employee. Establishing who is the "author" of a program is likely to be difficult.

The duration of protection is not mentioned so the same will apply as for literary works, until the author's death or first publication, whichever comes last, and for 50 years thereafter: a notion which many find bizarre.

As a literary work, a program will have to be in the public domain. The Amendment provides that programs being stored in a computer and also original, on which the Amendment gives no guidance at all.

The Amendment is more helpful on other points. It provides that copyright protection is given to programs which were in existence before September 16, 1985, but the Amendment cannot be used as the basis of an action for alleged infringement which took place before it came into force. It also provides that the storage of a program in a computer will constitute reproduction as will making an adaptation of a program meaning making a version in

provided no appliance for making multiple copies is used. Leaving aside the uncertainties caused by the absence of definitions of "in the course of instruction" and "elsewhere" the result is to permit schoolteachers and pupils to copy on to the blackboard or into exercise books but to prohibit the use of photocopiers and other mechanical aids to multiple copying.

On the face of it a teacher or pupil will be able to copy programs from one computer to another provided it can be shown that two computers making copies one at a time does not constitute an appliance for making multiple copies. Whether the same would apply

if the computers were in different schools, under a networking system for example, is more uncertain since the Act does say "at a school" which suggests a single institution if not a single building.

Section 41 also permits the copying of literary works as part of the question to be answered in an examination or in an answer to such a question. In this case none of the restrictions apply and multiple copying is permitted by anyone and anywhere. There is no definition of "examination purposes" but from now on computer programs can be included along with printed material.

Only time will tell how rights owners and users, and perhaps the courts, will interpret the application to programs of the provisions for the traditional types of literary material. At present it appears that the authors (or their employers) of all existing and future programs which are original and in material form or stored in a computer can, until the author's death and for another 50 years, control adaptation and reproduction.

On the other hand the educational user has a number of useful concessions which permit copying to the same extent as other literary works. It is to be hoped that the uncertainties of the new Amendment will be clarified in the White Paper on copyright promised for the winter.

MicroMedia AWARDS

The MicroMedia Awards are jointly sponsored by Mironet 800, Prestel Education and Teamedia Limited, and will be judged by School Link, Mironet and the Council for Educational Technology.

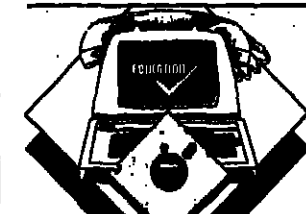
Entry is FREE and you do not have to be a subscriber to either Mironet 800 or Prestel Education. Entries must conform to Prestel format, be developed using either Micro Viewdata or Communitel software and submitted on a BBC 40- or 80-track disk by Friday 17th January, 1986.

The awards are made in three categories: two are for schools, Primary and Secondary, whilst the third is open to all. Each month the winning school entries will be displayed on Prestel's Education pages, while the winning entry in the open category will be displayed on Mironet 800.

If you are already using Micro Viewdata or Communitel software, tick the coupon below for your FREE entry form - no stamp required. If not, tick below for full details of these systems. Either system can be ordered via Mironet 800's teleshopping pages, or complete the order form below for your copy of Micro Viewdata.

Each month, winning entries will be displayed on Prestel. In addition, they will each receive £30 in cash, a mounted certificate and a coloured printout of their title page.

Viewdata Terminal Emulator



Access Prestel and other Viewdata services

Also included is an offline viewdata frame editor enabling, for example, the offline preparation and editing of Mailbox messages. You can also use the editor to create personalized menu frames with hidden function key definitions containing Prestel commands and/or terminal functions. Such commands can also be put into a BOOT file enabling you, for example, to configure your modem, log on to Prestel, send a previously prepared Mailbox message and log off simply by booting the disk.

Information at your fingertips

Micro Viewdata is a complete offline simulation of Prestel for the BBC Model B Micro and provides more power for less money than rival software packages.

The program allows you to create viewdata frames, route them into a structured database, store them on disk and display them as if derived from a viewdata service such as Prestel. All of the features of a Prestel-type system are supported including screen layout, use of key commands, creating structures and page/frame numbering. The powerful frame editor enables frames to be created quickly and efficiently - in particular, using on-screen windows and cut-and-paste techniques. You may reposition or copy text and graphics during the creation process without having to rekey editing designs. The editor also adds a further dimension by providing a powerful 'undo' command which affords an element of experimentation not available in other programs in this price bracket.

Up to 85 frames may be stored on a typical 40-track disk - large databases may extend across any combination of available drives providing a capacity of up to an incredible 780 frames using twin 80-track double-sided disks. Micro Viewdata also provides the ability to incorporate existing frames from online services such as Prestel and Communitel host systems and using the 'joiner' facility, in conjunction with Prestel Education's Viewdata Terminal Emulator software, whole groups of frames may be transferred with ease. This is of particular value to the educational user, who may wish to use Micro Viewdata as an offline trainer for Prestel as a means of displaying Prestel information without having to repeatedly incur online charges.

Full documentation is provided along with a printer-dump utility for Epson printers, coloured keymaps, screen planning grid and photocopy masters of screens from the demo database which form part of a novel routing exercise described in the text. Despite all this, Micro Viewdata costs only £28.00 (total £32.08 inc p & p and VAT) or £18.00 (total £21.94 inc p & p and VAT) with MSP discount for UK schools.

Micro Viewdata was developed by the Microelectronics Education Programme in this price bracket.

PRISM Modem 1000

The Prism 1000 modem allows your BBC or 3802/4802 micro access to the public telephone system and provides a connection between your micro and a range viewdata services - including Prestel and MIRONET 800.

Reliability and ease of use are the key features of this hard-wired modem. Evaluated by the Test Bureau, January '85, the Prism 1000 sits neatly underneath the telephone and may be slotted within 3 m of a telephone socket. Two switches on the front panel are used to select Online/Offline and mode of operation - either 1200/75 full



duplex or 1200/1200 half duplex. Three LEDs show power on, carrier detect and Online status. Ideally suited for use with the Prestel Education Viewdata Terminal Emulator software described above, BT approved and complete with connecting leads.

Price: Only £49.95 (total £59.95 inc p & p and VAT) for the BBC version, £59.95 (total £72.95 inc p & p and VAT) for the 3802/4802 version. Limited stocks available.

Every year Schools and Universities decide how to spend £3,500,000,000 on equipment and supplies. Convince them to spend it with you at

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Barbican Centre 22-25 January 1986

Educationalists have purchasing power, but they're cautious buyers. They want to compare specifications and prices, they want to be sure they're buying the right product, they want to try before they buy.

The Definitive Showcase The High Technology and Computers in Education Exhibition is established as the definitive showcase for high technology products. Last year over 15,000 educational purchasers and 300 exhibitors met at the Barbican. This year we know it will attract more visitors and exhibitors alike.

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on our behalf every commercial and educational supplier from embassies and High Commissions. The British Educational Equipment Association The exhibition is co-organized with the British Educational Equipment Association and has the active support of the Department of Education and Science and the Central Office of Information. For more details of the High Technology and Computers in Education Exhibition contact Timothy Collins, Exhibitions Ltd., 118 House, 47 High Road, Finchley, N12 6AF. Tel 01-349 4661.

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EXTRA

SOFTWARE
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R.A. Sparkes, University of Stirling

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The course consists of three independent units, each with accompanying software on disk, which are available separately or in a bumper pack.

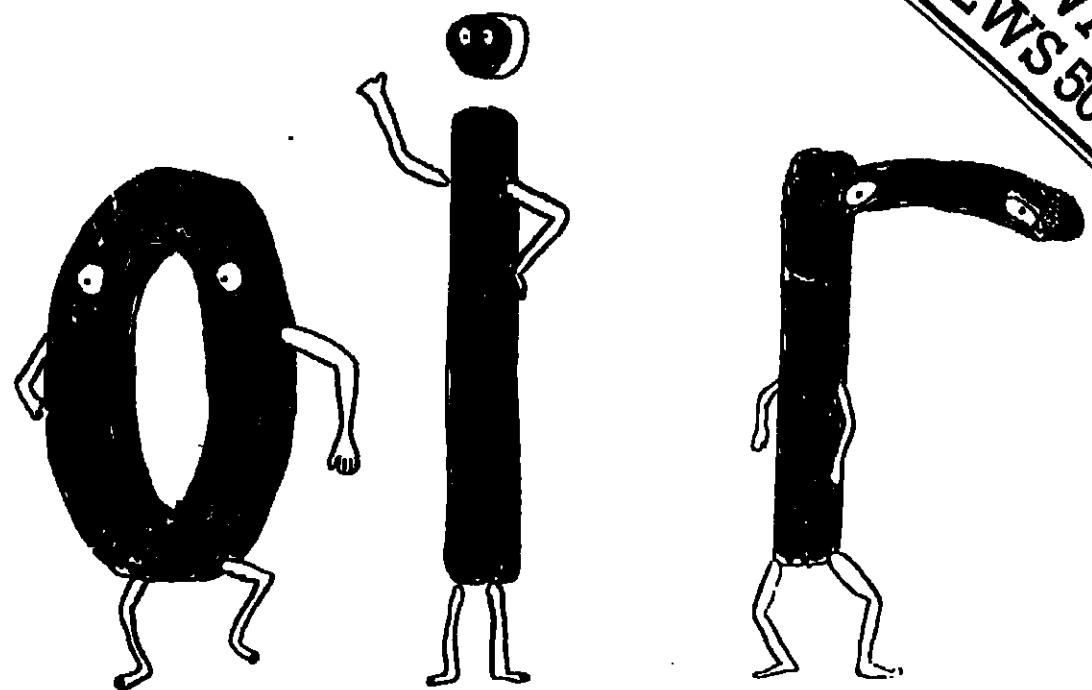
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All shapes & sizes

John Bald on letter and number programs for primary and remedial classes

Letter and Number Formation

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Maker/User £7 (£9)

All for BBC B or RML 380Z and 480Z. Disk only

Shops and Supermarket

Star Concept Keyboard

Prices in brackets apply outside MEP's Northern Region

Microelectronics Education Program

(Northern Region), Regional Information Centre, Resources Centre, Coach Lane Campus, Newcastle upon Tyne NE7 7XA.

The initial effect of Letter and Number Formation is startling. A shape like a

polo mint appears on a coloured background, flashing and changing

colour itself before the centre is filled in and the whole circle moves off to

trace the shape of a letter or number. Characters are presented one at a

time, but the teacher can select a series, which is then shown in cycles

with a smiley face at the end of each showing to mark time while another

child comes to view the screen. The program offers handwriting shapes as

well as letters and it is possible to modify the speed and texture of the

tracing.

After two minutes of this my head

was reeling. The program was, however, produced for the MEP Northern

Primary Users' Group, which presumably assessed its effects on children

who, it is fair to add, would probably not be exposed to the program for

more than half a minute at a time. There is, however, no attempt in the

scant documentation either to relate the program to an approach to

teaching writing or to explain the need for such garish presentation.

It is also far from clear from the

notes whether the children should "follow" the character on the screen by

tracing with a finger or whether they

should just watch. In the first case they

would have to be very close to the

screen indeed, while in the second they

would be passive observers. Neither

alternative is satisfactory and the program

and its documentation should both be

reconsidered by the MEP.

Letters, from the MEP Low Attainers

Project, has the limited aim of

helping children to discriminate between the letters b and d, and p and q,

using a space invaders game. Children

have to move a cursor along a row of

letters and fire when it reaches the

target letter, incurring a time penalty

for errors and omissions. There is, however, nothing in the "Teacher's

Guide" to relate the program to patterns

in language and in letter formation, and obviously no attempt in the

program itself to present letters in a

meaningful context. The authors offer

no evidence to suggest that children

benefit from this use of computers and

will have to produce something much

more substantial.

Shops and Supermarket, also from

the Low Attainers Project, may prove

to be much more useful. The programs

are based on plans, either of a supermarket or a shopping centre, which are

used as concept keyboard overlays, and pupils have either to indicate

where certain items can be bought, or, at the harder levels, to complete a

shopping list using the shortest possible route.

The shopping centre has two roads

which can only be crossed at the

pedestrian crossings, and the keyboard

itself has to be used with care—I was, I

felt, quite unjustly penalized for

"jumping across the road" by mistake, and paid more attention in consequence.

The notes contain a brief account

by a teacher of the effect of the

program on a child of nine who has

serious communication problems, including very poor speech.

After using Shops and Supermarket

on his own, he was able to act as guide

for another child, and the teacher

reports more general benefits in terms

of concentration as well as communication. This is the kind of

evidence that is badly needed if we are

to realize the potential of computers in

education, and the teacher's remarks

should, if possible, be expanded and

published as a case study.

Maker/User is a file-handling program

"designed with remedial pupils in

mind", which is a bad start as there is

no such thing as a "remedial pupil". Its

aim is to develop vocabulary by encouraging pupils to make files of

"descriptive words" surrounding objects or people and then to decide

whether the words are "interesting", "ordinary", "wrong" or "descriptions

that don't quite fit". Completed files can be printed or used to play a

number of guessing games.

The sample files suffer from the

rigidity of the classification system and

often contain judgments which do not

seem to be based on experience of real

people. In the "Ages of Man" file, for example, it is considered inappropriate

for an old person to be described as "sneaky" or "romantic", and the only

word in the file relating to illness is

"poorly". The pack is not helped by a

set of drawings which contain far too

little detail for their purpose, but its

most serious problems stem from an

inadequate concept of the dynamics of

language development. The authors

have undoubtedly generated interaction

and interest among pupils with special

needs, but their stated purpose is

to extend vocabulary and not just to

use what pupils already have.

This is a complex process, involving

issues of thought and language which

extend far beyond the range of the

program notes, and is an area in which

the contribution of computers is just

beginning to be felt. The program

would have benefited from the inclusion

of more detailed evidence and

argument in the documentation, preferably

in the form of substantial extracts

from pupils' work, and from better

sample files and illustrations. In its

present form I would not use it.

Ups and downs.

Spelling

£12

Ambridge

£15

For BBC B, disk only.

From I McEwan, 6, Tenterfield House,

London Road, Welwyn, Herts.

AL6 9HZ.

Spelling is a simple program based on

word-banks and the successful Look-

Cover-Write-Check technique for

learning new words. It will hold up to

30 lists with a maximum of 10 words in

each, and, as there are no pre-selected

lists, effectively requires that these be

taken from pupils' work. The program

is easy to use, and the documentation

direct approach and attractive presentation

make it at least as good as the best of the competition.

Ambridge, like Spelling, was originally

designed for use with deaf and partially-hearing children, and is a

very useful teaching aid.

I was so surprised at this triviality

program of the batch and also the

longest, using up almost all of the

computer's memory to allow for a

number of special effects and permit

commands to be entered in normal

English rather than machine code.

This feature, combined with the inconvenience

of the program, makes it cumbersome to use, but

some of the effects, notably the possibility

of making all or part of a poem move on the screen, could well be

worth the effort.

EXTRA

Roads

Four programs for the BBC Model B, £31.26 or separately £8.65 (cassette), £26 (disk)
Fernleaf Educational Software, 31 Old Road West, Gravesend, Kent DA11.

Fernleaf Educational Software is, to quote its publicity literature, "an independent and rapidly expanding software publisher" whose latest catalogue lists 45 programs mostly for the 7 to 13 year age range. Individual programs can be bought separately but usually, form part of a group of three or four programs around a theme.

Roads is such a theme consisting of four programs: "Oil Deliveries", "Which Load?", "The Bypass" and "Black Spots". They are seen by the designers as part of a wider program of work on roads and not as ends in themselves. The first two concern using roads whereas the others are concerned with planning and building new sections of road and require much greater subjective judgements.

The programs are neatly packaged with a 20-page booklet for the teacher which includes very clear and helpful worksheets that can be copied. They have clear menu options, all have a consistent "c" button to press to move on, and in three cases suggest calling in the help of an adult.

"Oil Deliveries" deals with a home heating company guaranteeing delivery of oil to homes in various villages within 48 hours. Route planning, time factors, organizing delivery schedules and tanker capacity are all involved. The graphics are limited but adequate and the main concepts are time and capacity.

To succeed, players (one or two groups at a time at two levels of complexity) must apply logic, strategy, competitiveness and keep careful records. There is a sample run, which is a good idea but suffers from being too fast and not user-controllable. Similarly, there is some inconsistency between

visual display and booklet (eg, playing sheet or record sheet). Various mathematical and logical skills are developed and it presents a challenge to the players.

"Which Load?", on the other hand, is about a one-man concern operating a delivery service to and from a number of towns. The lorry can carry a limited weight and length of crates. The driver gets paid by the weight and distance each crate is carried. The object is to "earn" as much as possible over two- or three-day delivery schedules.

This is more suited to older pupils (10-11 upwards) than "Oil Deliveries", and involves the concepts of time, weight and length of loads. The meaning of "crate number" is not initially

Hide and seek

Space Rescue

Cassette or disk £20 + VAT

Space Programme Alpha

Cassette £32.50 + VAT

Class Writer and Class Readers

Cassette and disk £9 + VAT and £12 + VAT respectively

Add-Verse

Cassette £12 + VAT

All for BBC B

Cambridge Language Arts Software, 93 Bedwardine Rd, London SE19.

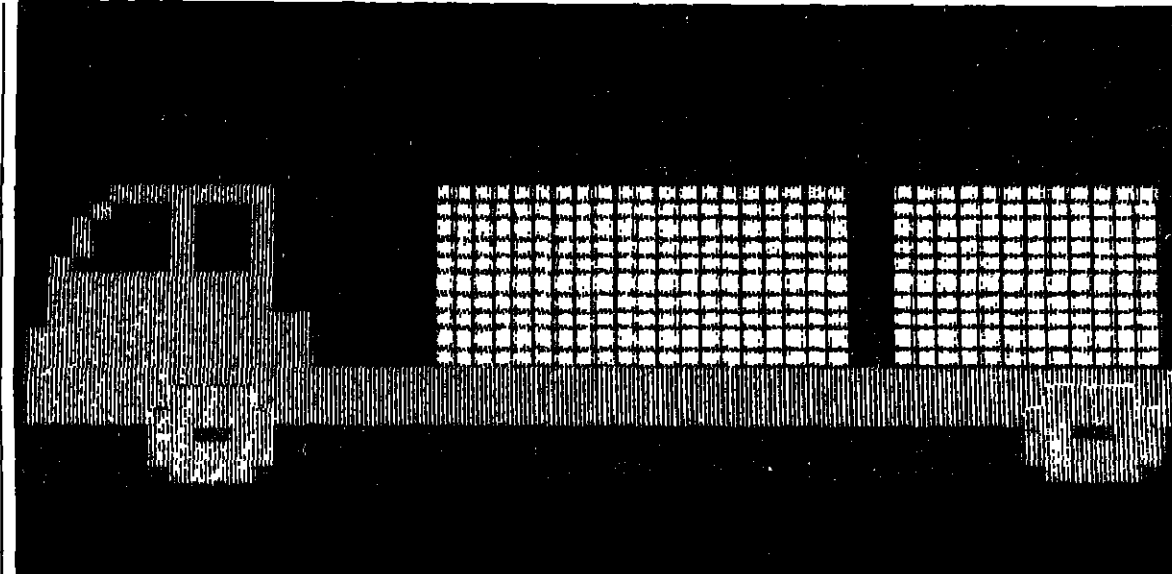
Space Rescue and Space Programme Alpha are simple simulations designed, with peripheral activities, to form the basis of an extended project for younger children of secondary school age and perhaps older juniors.

In Space Rescue, pupils taking vital drugs to a stranded spacecraft on a strange planet have to make a forced landing and continue their mission on foot, negotiating a number of hazards with the aid of selected items of equipment. Their task, however, is not too difficult. They do not have to plan a route, make any serious use of an elaborately-described "survival kit" from the manual, or indeed do anything but solve three simple problems presented on the screen.

I was so surprised at this triviality program of the batch and also the longest, using up almost all of the computer's memory to allow for a number of special effects and permit commands to be entered in normal English rather than machine code. This feature, combined with the inconvenience of the cassette format, makes the program cumbersome to use, but some of the effects, notably the possibility of making all or part of a poem move on the screen, could well be worth the effort.

Neither program, considered on its own merits, has any clear advantage over the competition. Whether the system as a whole proves to be an invaluable teaching aid or a gimmick will become clear as more of it is published. Add-Verse is the most distinctive program of the batch and also the longest, using up almost all of the computer's memory to allow for a number of special effects and permit commands to be entered in normal English rather than machine code. This feature, combined with the inconvenience of the cassette format, makes the program cumbersome to use, but some of the effects, notably the possibility of making all or part of a poem move on the screen, could well be worth the effort.

John Bald



On the road

Ashley Kent on road programs for maths and environmental studies

clear nor is why weight times hours gives points. Also the relationship between the graphics and units of weight and length is disconcerting. However, this exercise is certainly

challenging and can be played at varying levels of sophistication. "The Bypass" is, however, quite different and involves planning a delivery service to and from a number of towns. The lorry can carry a limited weight and length of crates. The driver gets paid by the weight and distance each crate is carried. The object is to "earn" as much as possible over two- or three-day delivery schedules.

This is more suited to older pupils (10-11 upwards) than "Oil Deliveries", and involves the concepts of time, weight and length of loads. The meaning of "crate number" is not initially

clear nor is why weight times hours gives points. Also the relationship between the graphics and units of weight and length is disconcerting. However, this exercise is certainly challenging and can be played at varying levels of sophistication.

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This is more suited to older pupils (10-11 upwards) than "Oil Deliveries", and involves the concepts of time, weight and length of loads. The meaning of "crate number" is not initially

blue houses and farmland. There are some problems, however.

For instance, this reviewer found it difficult on several occasions to finish his route; the cost limit of 3,500 somas (what a silly word) is too restricting and if you want to replace a part of the route it is necessary to start again. The arrow allowing you to build the road starts for some strange reason in the bottom left corner and the base—not tip—of the arrow has to be used. However, it does tabulate costs well, introduces a variety of ideas and gives an indication of how various groups (including the Minister) are involved in the planning process.

"Black Spots" concerns the opening of a new motorway bringing problems

to a famous beauty spot. Accidents and traffic on a narrow twisty road increase and road improvements are necessary. However, approval must be given by the Minister, local people and conservation groups.

The problem is set up very well by a series of TV newscasts and the likely factors affecting route planning are considered. Types of building structure are related to the topography and involve varying costs. Cross sections of planned route can be called up, which is excellent if crude on the graphics. At the end, the user is asked to evaluate the chosen scheme against their earlier responses and from other viewpoints.

This is excellent values education. On the other hand, small means include another strange unit of currency (erist) and the inflexibility of having to go through the "scene setting" every time a new route is to be planned. A table towards the end summarizes the exercise very well and throughout, pertinent questions are asked of the user. This program was particularly appealing.

Overall, these are an interesting and varied quartet. The first two are strategy games requiring logic and mathematics. The others would much more easily fit a standard environmental studies/geography course. I liked the values element in programs three and four and certainly it would be best value to buy all four programs.

These programs will certainly motivate youngsters through their emphasis on challenge, competition and strategy. However, they are no soft option for the teacher. They require considerable investment in time (like much computer assisted learning) for familiarization and integration into a curriculum theme. My major concern is that the younger age groups and less able may not be able to cope and there seems to be no hard copy facility on the programs. However, they are well worth considering by teachers of top junior, middle school classes in the context of geography, environmental and social studies.

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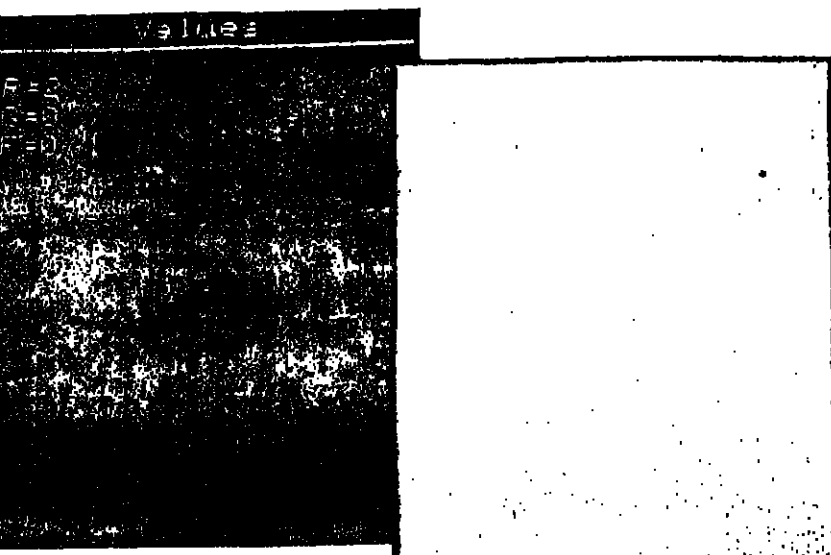
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Science landmark

JJ Wellington on a dynamic modelling system that creates and tests models

Dynamic Modelling System
BBC, RML 380/480Z and Apple
Disk £35 + VAT
Longman Software, Longman House,
Burnt Mill, Harlow, Essex CM20 2JE.

This package establishes a landmark in science software for microcomputers. In 1977, Kemmis et al distinguished four types of paradigms of Computer Assisted Learning: instructional, relayatory, conjectural and emancipatory. Examples of the instructional paradigm abound in school software: word processors, otherwise known as skill-and-drill programs. The relayatory paradigm is usually exemplified by simulation programs, in which the user gradually discovers the nature of a process, a phenomenon or an event by using a simulation of it.

In every simulation the model of the event or process is ready-created and in a sense "untouchable" - the user can control certain variables, eg the pressure of a gas, but cannot tamper with the model itself.

The Dynamic Modelling System (DMS for short) steps straight into the conjectural paradigm by allowing the user to create models, test them, and even compare them with other models. It therefore allows entry into the heart of scientific method. This is why the program is a landmark for both school science and educational computing.

The DMS consists of two disks and two explanatory booklets which guide the user clearly and carefully through the initial stages of using the program.

As an example, the user is invited to try a model of the way in which a population of rabbits increases. This can be typed in on a space on "pad" to the left of the screen as follows:

$$B = F \times R \\ R = R + B \\ G = G + 1$$

The system requires models to be written in the syntax of BASIC, eg for multiplication. However, no extensive knowledge of Basic is required. In the model above, F represents the fertility rate, R is the number of rabbits, and B the number of births. The initial values of the constant and variables must now be set, eg $R = 2$, $G = 0$, $F = 0.1$. (It might be interesting to try $R = 1$). A graph can be drawn showing how the population of rabbits grows.

This simple example shows how a model can be created and tested to see how closely its prediction matches reality. All sorts of questions for discussion could be followed. Is this the way rabbits really breed? Does the population grow forever? How could a farmer with a shotgun be built into the model, or better still Dewhurst the Butcher? Even a model as simple as this has endless possibilities for discussion and exploration, either in small-group or whole class work.

In addition to the rabbit model, the DMS offers no less than 26 ready-created but transparent and touchable models on the "Physics Models" disk. These include models of free fall, projectile motion, orbital motion,

oscillations, interference and diffraction, and models of the atom. These can be called up from the disk, examined, and (unlike a simulation) tampered with.

The booklet suggests three ways of using these models and the system as a whole which would clearly break new ground for most science teachers.

First, a class teacher could call up a prepared model stored on disk, run it, and discuss the model and its results with the group. Second, a teacher could start with all or part of a model and through discussion revise it and then test it. Third, the teacher could start from scratch, build up a model and test it, all in conjunction with the class.

The first strategy is closest to the revolutionary type of CAL (simulation) with the important differences that the model is visible and alterable. In short, all three uses of the Dynamic Modelling System offer far more control over the computer.

In my view, it would take a full school term to explore the possibilities of DMS in the science classroom. Indeed, the potential of the system is by no means limited to science education. Its possibilities in Economics, Geography, History and PE teaching should all be explored. In its suggested uses, however, the program could change the way that many science teachers think about science and science education. If science does proceed by successive refinement of models, then this program offers genuine insight into the process.

Not the China syndrome



When I ran the nuclear reactor simulation I found rather chunky, slowly drawn graphics depicting an Advanced Gas Cooled Reactor. I was able to select the whole system of one of the component parts and plot graphs of two variables against time. Numerical values of other variables were displayed on the screen. I could thus study the effect of control rod position on reactor power; show the resulting core temperature, or attempt to maintain a constant reactivity. Various results ensued and these undoubtedly helped my understanding of the system. Armed with my new knowledge, I attempted a spectacular suicide by removing the control rods from the reactor and watching the reactor power and core temperature rise.

I was soon disturbed by vigorous activity from the disk drive as repeated warnings appeared on the screen. Soon the warning power station was

closed down by the operation of the safety trip. All very reassuring, but not as entertaining for young students as it could have been. This package will never be subtitled *The China Syndrome* by the Science Sixth.

The simulation of electricity supply gives the user control of a number of power stations of different capacities, using different fuels and involving different costs. All parameters can be altered; the electricity demand can be changed and power stations can be built or closed down. The operation of the program is straightforward.

The strength of this package lies in the excellent set of written exercises supplied in loose-leaf form in individual packs. The Physical Science pack, for example, sets up situations, inviting scientific solutions. Smaller packs cover economic, mathematical, geological and geographical aspects of the industry. Used across several classes this simulation would provide an excellent way of integrating a range of apparently diverse subjects and showing how they all influence an industry.

Both of these packs are serious educational resources needing considerable study time by both teacher and student if the most is to be gained from them. If this commitment is made, they will undoubtedly help in the understanding of their respective topics and illustrate the power of computer models as a planning and

Alan Vincent

EXTRA

Of the people, for the people...

James Bromwich on a census program with applications for geography, maths, sociology and public administration

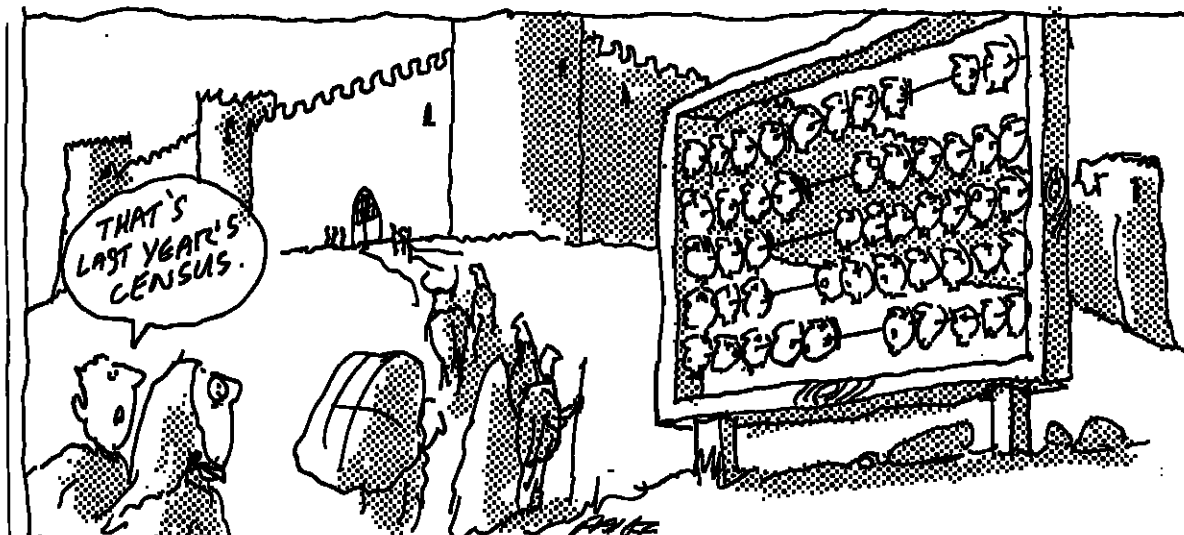
Census Data Base
Price: £75 + VAT
£25 + VAT for additional data disks
Nelcal Computer Package, Thomas Nelson and Sons Ltd, 51 York Place, Edinburgh EH1 3JD.

Possibly the most famous census is that described by Luke: "It happened in those days an edict went forth from Caesar for the whole world to register in a census". But he is only describing a practice that had long been familiar in Rome, where it had been used since at least the fifth century, and had even earlier precedents in Mesopotamia and China.

The purpose of these ancient censuses was limited: finding the numbers of potential fighting men and the extent to which governments could tax their subjects. Unfortunately only a handful of fragmented district returns survive from all these early examples of clerical labour: they would have provided the main source for any study of the social and economic structure of the ancient world. Today the problem is a different one.

The generation of statistics by the modern census is vast. During one evening in April 1981, the equivalent of the whole population of the Roman Empire (estimated) completed forms in Britain that demanded answers to a range of questions that would have stupefied an illiterate Roman peasant. Having created this enormous resource of information, the problems of storage, analysis and explanation become apparent. The danger is that worthwhile questions and deductions become the exclusive preserve of government officials and a few specialists.

The computer has transformed things of course. Not only can bureaucracies collect and store census data with considerably greater ease than



before, but the potential has been created for a far wider group of people than before to examine the evidence and even apply sophisticated techniques of analysis and display.

Census Data Base takes the 1981 census and supplies a program, a set of data and the facility to produce and edit further data of your own. The program disk enables the user to use a wide variety of approaches ranging from percentages to forms of correlation and graphic representation, such as mapping or pie charts. The data disk provided with the package itself, assembled material from the enumerating districts and the wards of Birmingham.

Also available are disks covering Bristol and London, planned ones will deal with Glasgow and Sheffield. In addition to the editing disk provided, it is essential for the user to have formatted disks on which to put any of the material generated, whether through

the tasks possible with the data provided or any extra sources, such as local census details.

It is a package prepared to a high standard - it should be at the price and it has been carefully planned for school or FE college use. However, its deliberately spelled out approach does not make it really suitable for computer beginners, though vital when dealing with complicated raw material and carrying out intricate tasks. Some computer skill, or at least access to it, will also be helpful to overcome other possible difficulties. The necessity to install CP/M on the disks, an essential first step, is strangely tucked away on the last page of the manual under "Technical Notes".

Nor is it made clear that single rather than double density disks should be formatted - the dreaded BDOS error seems to occur when you try to save material using the latter type. The "Getting Started" example is even

more disturbing for the new user. The program command to map cannot do it without the relevant Birmingham data being in the disk unit; unfortunately the instructions do not provide for reload stage while the VDU only confirms an error has taken place. None of these criticisms are fundamental, but they do suggest the need for teachers to take time in sorting out both the potential and the practical use of the package.

The manual is commendably full of worked step-by-step examples, reassuring when it is 74 pages long, much of it double columned. The examples are especially helpful in suggesting suitable age-groups and classroom applications. They make it clear what the teacher should do beforehand for preparation and what resources will be needed in the classroom (reassuringly realistic) as well as stating distinct objectives and issues to be raised.

Undoubtedly this is software that

can stimulate young students. A few tasks are described for lower secondary school use, but most are aimed at examination classes. Some, such as those involving classifying into groups or the preparation of population pyramids should help O/CSE pupils. The majority, such as Spearman Rank Correlation, will most obviously apply to A level work.

Clearly the subject area that would most benefit from *Census Data Base* is geography, especially syllabuses that stress quantitative methods. Its city bias makes it valuable for urban geography and it is no surprise that John Westaway has also prepared a book that could be used in conjunction with the package.

But its possible application goes much further than this. As well as obvious comparative work with rural areas, especially if the editing facilities and the availability of census returns from local authorities are used, it could be equally valuable in other subjects. Mathematics courses would find an excellent opportunity to show specific techniques in action. Sociology and public administration should be able to use the information effectively to indicate the foundations of social policy problems. Age distribution patterns can stimulate discussion on both pensions and school needs. Variations in housing provision and class distinctions should provoke interest in social structure and income distribution.

The most important advice in the manual is tucked away on page 61. "Some words of caution" warns the teacher of the dangers inherent in working with the census: the spurious sense of absolute truth that can result in misleading conclusions. Using *Census Data Base* involves the interplay of complex concepts, with the additional problem of apparent numerical precision.

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Longman Micro Software



In the trenches

Attack on the Somme
Cassette or disk
BBC Model B or Commodore 64
£13.99 + cost of booklets (£2.75)
Tressell Publications, Unit 3, 22
Campbell Road, Brighton BN1 4QD.

Tressell are one of the best educational software producers. They have succeeded in combining technically well designed programs with a real and deep interest in history. Their teaching background makes their material some of the most carefully thought out available. If anything, they have thought so thoroughly about the potential of historical work in secondary schools that perhaps they give too much background information for hardpressed teachers to absorb quickly. However, the revised package, *Attack on the Somme*, is worth it.

Originally published as a simulation without computer programs, this has been expertly adapted for practical classroom use by the 13-16 age group. Two programs provide an initial study of the various features governing action in trench warfare and then a simulation of an attack in which the user make the necessary choices of length of bombardment, wave attack, time of attack, etc. It forces discussion and it provides adequate information to make sensible choices. There are enough restrictions to prevent children making totally different decisions from those of Haig, yet permit sensible variations to allow comparison with

the British Commander-in-Chief's actual preferences.

Without the support material the programs will provide an interesting though rather cerebral view of the First World War. Computers are very good at dehumanizing killing. However, the use of adult language - the designers have not been afraid to use words to get over the essential knowledge - the effective but low-key shelling effects and exploding mines, encourage serious involvement, not vicarious pleasure in slaughter. Using the fine support books should ensure that pupils do respond in the way that Tressell want.

By selecting a variety of evidence, including a range of contemporary sources (generals, privates, nurses, women at home, pacifists, etc) as well as comments by historians and photographs of the front then and today, the fundamentals of historical research are presented for children to use. It is stimulating and moving.

One small quibble. The perspective of the Somme battle is that of the decision maker at the top. As Tressell themselves admit, it is the view of Haig and his staff, not the private or junior officer, nor that of the Germans. Undoubtedly we see the implications of their decisions, but it is a pity a program could not be developed that placed the child in a less authoritative position. Nevertheless it is a wish only provoked by the high standard set by the material as a whole.

James Bromwich

EXTRA

Behind bars

Paul McGee looks at the Bar Code Reader Project



The Bar Code Reader Project
BBC Model B version
£49.95
RML version (being developed)
Addison-Wesley, Finchampstead Rd
Wokingham, Berks RG11 2NZ.

In his foreword to the user manual, Mike Bostock, project director, says that this pack is designed to demonstrate Information Technology in action, provide a valuable enhancement to any studies which wish to examine practical aspects of the New Technology, and offer a facility for the enhancement of learning. Only the first of these aims is met fully by the teaching pack, and the last seems to be a flight of fancy.

The pack contains the bar code reader, the user guide, the relevant software, a metal stencil, and a sheet of acetate. The reader is attractively styled but the warning, printed in bold, about cleaning the unit and avoiding dropping it does not suggest the robustness which schools often demand.

The reader is simple to connect and the scanning program helps to develop a good reading style. The first activity, reading BASIC programs, is perhaps the most successful application in the pack. It provides an obvious benefit to those who would otherwise have laboriously typed the programs which are now listed as bar codes in some of the

popular magazines. It also allows programs to be cheaply archived and transmitted, and some MEP copyright free programs are due to be published in this form.

Most products now have bar codes on them to allow point of sale systems to produce itemized bills and do stock control. The pack contains programs to read the codes and give the country of origin and product number. The codes can be stored and retrieved for later use with a program which produces bills.

The inflexibility of the package is shown by the difficulty of a pupil, or teacher, trying to make this activity more realistic so that the bill is produced as the items are scanned. This reflects the teaching style of the package which uses the traditional science teacher approach of demonstration rather than genuine pupil involvement.

Pupils are more involved in sending messages created using the stencil. This includes some good work for the more able Computer Studies pupils on checksums, although the process is tedious even when the message encoding program is used. There is some potential in this idea but no help is given to the pupil who wishes to turn this transient experience into a worthwhile activity by storing the messages for later use.

A good feature of the package is that the breadth of applications gives a valuable stimulus for discussion. Not all the applications are a sensible use of bar codes but all raise interesting questions about the coding of data. This is particularly true in the music examples where tunes represented in bar code format can be read.

The use of the bar code reader to scan pictures and display them on the

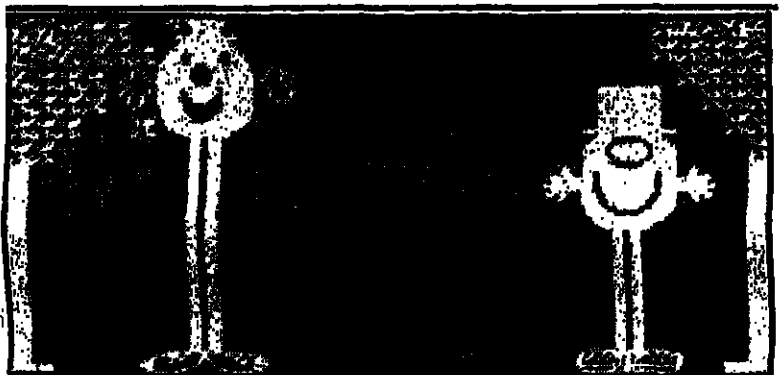
screen is a good idea, but the execution is patchy. The text points out the need to use finer definition and to move the pen at constant speed, which suggests an interesting technology project.

The last activity is to print Basic programs as bar codes. It is a pity that the program does not print data as well, as this would provide many more useful applications.

The user manual contains instructions which are easy to follow, appendices giving technical details, and worksheets which can be photocopied. The general approach of the worksheets is to start with simple instructions and lead the pupil to more creative activities. This is not always helpful as the harder work often distracts from the straightforward instructions, although teachers can overcome this by judicious use of screens and photocopies.

The bar code reader is a valuable resource, as 2,500 customers would testify, and the software provided goes a long way to making it useful. There must be enough applications now for a smart publisher to compile a booklet of useful routines.

Although the project has the same basic demonstration philosophy as the BBC Buggy, like that device it can be put to better uses by dedicated users, both teachers and pupils. It should certainly be an essential resource for any secondary school with IT, Technology and Computer Studies fighting over its use.



Word merchants

Word Games with the Mr Men By Widge Software for Mirrosoft BBC Model B/Electron/Commodore 64 £9.95 cassette, £12.95 disk. Mirrosoft, Maxwell House, Worship Street, London EC2A 2EN.

This is a double cassette pack, and thus delivers two different games. They have both passed the "Daddy-can-we-play-that-game-again?" test: the six-year-old (who is not the quickest word-merchant in the world) has found them fun.

They are, however, bedevilled by several difficulties. One is that it requires a better brain than this adult or that child possesses to distinguish between the various transcriptions of the Mr Men characters, being "narrow" or "thin" is rather important to these comparison-word games, and yet it takes an age to see which

picture is which. And, worse, I found myself being zapped by the ticking-off noise for seeing "little" as being the opposite of "large". It isn't, in this game. "Small" is. "Little" is the opposite of "big". One isn't always learning language with these games; one is learning the rules of the games themselves.

Nor do I like the way the letters of the words are written (though the children seem to have got used to their extreme ugliness). And the little leaping character in one of the games is an infuriating yellow. These latter belly-aches come back to my old complaint that computer games are visually unattractive, presumably more due to technical limitations than philistine programmers.

A welcome move is that Mirrosoft now offer a £3 upgrading service for cassettes. Mail them in, and a disk-version is given in exchange.

Richard North

bits

DEVELOPMENT CONTRACT
The Microelectronics Education Programme has awarded its first development contract for 16-bit education software to Apply Systems Knowledge (ASK) to develop a linked graphics and database program together with sets of materials to illustrate educational applications.

Awarding the contract which is worth £25,000, Richard Fothergill, Director of MEP, said that the proposal fulfilled the criteria outlined by MEP. These were that the package should demonstrate the superiority of 16-bit technology. It should

original, and potentially relevant at some stage to most children in the 11-16 band.

SRA TITLES
SRA, Science Research Associates Ltd, have announced that some of their major software titles will now be available on disk for the BBC Micro and RML 380Z.

Already available for the Apple and IBM pc computers, the titles include "Micro Discovery", a suite of programs incorporating "Sentence", "Animator", "Story Writer", a public transport system; "Mandel's Law of Genetics"; and "Micros Made Easy", a course in computer literacy with which pupils aged nine upwards learn what the keys are for, what happens inside a computer and how to write simple programs.

Further information from Science Research Associates Ltd, Newton Road, Henley-on-Thames, Oxfordshire. RSC 01235 37111.

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MEDIA



Still from 'Bar Code', 16mm film animation by Quentin Miles

16-Upmanship

Hugh David on the BBC's showcase of video and film productions by schools and youth groups

Speaking at the end of the first part of 16-Up Showcase (BBC1), 24-year-old Nadine Marsh-Edwards from a London film and video workshop had some sound advice for young film- and video-makers. "Don't try to mimic TV," she said. "You can never achieve it because of the equipment they've got, the facilities they've got and the money they've got; you're always going to be disappointed."

Some of the less successful films included in the programme proved her point. It is difficult to track a camera, even if you mount it and the camera man in a pram or wheelchair, unless there is a smooth, solid surface beneath your feet. It is almost impossible to pan smoothly when the video camcorder is supported on your shoulder - or, come to that, on anything less than a professional tripod. It is far harder than it looks even to stand Whicker-like in front of a static camera and speak intelligently.

Encouragingly, however, most of the videos and 8mm and 16mm films produced by schools and youth groups which were included in that programme or the following week's could never be accused of lamely emulating mainstream television. Rather, they demonstrated how video (and to a slightly lesser extent film) has become thoroughly demystified.

Less than a decade after video recorders first began to achieve significant market penetration schools, clubs and community groups have got to grips with the medium, realizing that it is capable of a great deal more than mere timeshift.

The range of productions which they undertake was well illustrated by the 30 or so extracts given an airing in the two-part Showcase, mounted as part of

the BBC's rather ad hoc celebration of International Youth Year. A large number were straightforward films which told a story. But there were also animations which owed little or nothing to *Tom and Jerry* or even *Henry's Cat* in terms of either style or content. There were documentaries and what one could loosely call "art" films.

These latter two categories were perhaps the most interesting. They demonstrated what it is possible to achieve on a limited budget (one particularly good film came in at under £30) and highlighted the concerns of their makers. If the "art" films were sometimes self-indulgent, making one grateful that only representative extracts were broadcast, and even bringing to mind (in style if not subject-matter) such "experimental" films as Warhol's *Flesh* and *Chelsea Girls* and Yoko Ono's *Bottoms*, the documentaries were quite the reverse.

One, produced by the Tophins Youth Club in Aberdeenshire, was even in black and white. That might have been through practical necessity, but the bleak, gritty quality of the monochrome images - groups of teenagers lounging around on deserted street corners - intensified by some mournful harmonica music on the soundtrack was particularly effective. The video was part of the youth club's campaign for a cafe - something, anything to bring a bit of life to the benighted part of Scotland. Whether or not it achieved the desired effect, however, went unrecorded.

Equally simple and just as effective was *Engagement*, an entirely orthodox documentary which was included in the second programme. A community video produced by Clifford House in

Northampton, it movingly described the problems faced by two handicapped adults as they prepared to marry. The biggest surprise of the Showcase, however, went unnoticed by the studio experts. No one commented on the almost imperceptibly small influence of the pop video on young film makers. In some quarters there are being hailed as proof that the medium should be accorded true art status in its own right; along with trade promotional films they already constitute the biggest growth area within the audiovisual industry. But, for all the impact they have had on school- and youth-groups, they might just as well not exist. One of the two pure music videos included in programme two was even set to opera. A chorus from Delibes's *Lakme* was overlaid with lush, lingering shots of the sea - shades of the old interlude rather than the latest Nik Kershaw.

For some viewers, then, the 225 minutes-worth of young people's video the BBC's specially-picked selection panel judged worthy of a far wider audience than its original producers ever intended, would have been rather disappointing. Looked at in a wider context, however, it showed exactly how powerful video has become among the young; how, like newspapers and magazines, it is a part of their everyday lives. They are picking up camcorders as a matter of course - and using them responsibly. They feel no need for the gimmicky jump-cuts, Quintel images and high production budgets which characterize mainstream television programmes optimistically aimed at the young. Of far greater importance to them is the fact that borrowing a Super 8 film camera or hiring a camcorder for a weekend enables them to have their say.

In 44, a film produced by Nottingham Youth Theatre, provided the best example. It was an exploration of a subject which touched them all: the fact that one in every 44 16-year-old girls gets pregnant. It was a "stodgy" subject, according to Showcase presenter Steve Blackwell, but the group's U-matic video was anything but stodgy. It was a highly-effective exploration of the social issues behind the problem, but so perfectly tailored to the screen that it could not have been presented in any other medium.

It was modest, committed and totally unflashy. Nadine Marsh-Edwards must have loved it. Every scene backed up her conviction that, if they can only forget the style of orthodox television, video offers an exciting and uniquely flexible form of expression for every kind of youth group. And now that virtually every school and so many British homes possess a video recorder, and technical developments such as the recently-announced Sony 8mm video are making the actual shooting increasingly foolproof, there are fewer excuses than ever for not taking her at her word and "having a go".

Anticipating an upsurge of interest, the BBC has prepared a set of notes for groups wishing to prepare their own films and videos. They are available free of charge (but please enclose a large, addressed envelope and a 2p stamp) from 16-Up Showcase, BBC Television, London W12 8QT.

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QUEST

(Wednesday, 14.20 VHF4)

A programme about the Jewish winter festival of "Hanukkah". Nine to 12-year-olds learn the reasons for the eight festival days and the nine branch candelabrum.

STARTING SCIENCE

(Thursday, 11.20 ITV)

Primary school children look at different aspects of survival. Keeping warm involves insulation, shelter and water, while keeping safe involves training and experience.

DES LE DÉBUT

(Thursday, 13.20 BBC2)

A resource series offering basic skills in French. Here actually film, simple sketches and graphics combine to teach 11 to 13-year-olds how to deal with money and talk about themselves.

Continuing education and general interest

INSIDE INFORMATION

(Sunday, 16.30 VHF4)

The third programme in this series aiming to give a general introduction to the field of Information Technology. Paul Heiney presents the radio part of the self-learning package which includes a book, software and cassettes.

SCIENCE NOW

(Monday, 19.45 R4)

Do all animals rely on the capture of sunlight by plants to provide them with energy? Peter Evans visits the Scripps Institute of Oceanography to study strange communities of sea creatures.

HALLEY'S COMET

(From Nov 1, Ceefax page 720)

Starting on November 1, the BBC Ceefax service will run special pages on Halley's Comet, with hints for viewing the comet, background information, and updated sky maps.

THE REITH LECTURE

(Wednesday, 19.45 R4)

This year's Reith Lecturer, David Henderson, head of the Economics and Statistics Department in the Organization for Economic Cooperation and Development (OECD), talks to Mary Golding about his chosen theme, the influence of economic ideas on policy.



Only a link?

CHILDREN'S TELEVISION

Pob's Programme
Channel 4, Sundays 2.00pm.

They weren't going to do children's programmes at all at one time. Now, in the wake of *Chip's Comic* and re-runs of various ITV series designed to appeal to "youth", Channel 4 have come up with one of the best. *Pob's Programme* is a wholly original and quite glorious piece of family viewing.

If it wasn't for the hugely popular *EastEnders* omnibus (BBC1) against which it is scheduled, it would surely recast the shape of Sunday afternoons in millions of homes. As it is, it's well worth forgetting Alberi Square for a

week (or watching on Tuesday and Thursday nights) to make the acquaintance of the delightful *Pob*. Primary teachers will need to, for the peg-nosed puppet - who looks rather like Pinky or Perky (remember them?) crammed inside an MCC tie - could well become the Douglas or Zebbedo of the eighties. But he needs no magic garden. Charming, we are led to believe that *Pob* lives inside our television sets, a convention which is exploited to the full: he taps the back of the screen to attract our attention and cleans off the final credits with a duster.

But *Pob* is only a link. Created by Anne Wood (who gave Roland Rat to the world and *Rub-A-Dub Tub* to TV-am), his programme is actually a magazine with regular appearances by a number of specialists. Alan Hart's hands demonstrate simple craft ideas; Dick King Smith (from *Rub-A-Dub Tub*) hacks around the countryside following clues given by *Pob*; there are animated pictures devised and drawn by Oscar Grillo, singers, musicians, guest story-tellers including Roy Castle, Polly James and Charlie Williams and an odd feature called "Hide and Seek 10 Years Ago".

There is also a regular cartoon - a witty, sophisticated, buy-in from Czechoslovakia featuring the adventures of Maxi Dog - and a Channel 4 "activity book" (RSP) associated with the series. Intended to complement and extend the educational range of the programmes, this includes instructions for making many of Alan Hart's creations, number and alphabet games, pictures to colour and puzzles to solve. Channel 4 hope it will help fill the post-*Pob* lull of Sunday afternoons in winter - in other words that it will tempt parents to miss even the second half of the *EastEnders* omnibus.

Hugh David

Titles Available For Recording From Sunday 27th October 1985		Approximate Transmission Times.	
Sunday 27th October	8.00pm The Pogues: Trade Animals For Cuts A	Thursday 31st October	8.00pm The Pogues: Trade Animals For Cuts A
1.15pm The Pogues: Trade Animals For Cuts A	11.00pm Pottery Ladies: Part 3 For Code C	Friday 1st November	7.30pm Right to Reply For Code A
7.15pm Heart of The Dragon: Living (Repeat) For Code E	8.15pm A Week In Politics For Code B	10.30pm Well Being: Pottery In The System For Code D	
9.15pm Ivory Picture Tails A Story For Code C			
Tuesday 29th October			
2.45pm Years Ahead: For Code B			
5.30pm Anything We Can Do: I've Got A Problem (Repeat) For Code B			
Wednesday 30th October			
8.30pm Divorce Reports: For Code B			

Andrew Pegg

END PAGE

American music has been to the fore in Britain this year. The Almeida Theatre's Festival of Contemporary Music introduced several largely unknown composers as well as works like the concert version of Philip Glass's score for Paul Schrader's *Mishima*, while the Proms (and the earlier Festival of American Arts and Entertainment) featured a more predictable mix of American composers and performers. In Edinburgh, an influx of veteran American jazzmen took part in the McEwan International Jazz Festival, while artists of the stature of Miles Davis and Ornette Coleman have been heard (or are about to be heard) in London.

The most visible presence, however, certainly in media terms, was that of Bruce Springsteen, whose tour with The E Street Band played to ecstatic full houses around the country, a circumstance made remarkable by the fact that the smallest venue was Newcastle United's 38,000 capacity ground. If the press reaction, particularly that of the tabloids, was a little hysterical, that was largely due to the fact that Springsteen has maintained a very low public profile over the years, while building a fanatically loyal following through hard work and a dedication to his music - something unsurpassed in rock history.

Springsteen's current apotheosis has coincided with a remarkable resurgence of interest in American rock music, long considered in this country to be a moribund, if not already extinct, species. It is easily forgotten that, while punk took most productive root in this country as a reaction to an increasingly bland "adult oriented rock" mainstream, or the bombastic ravings of heavy metal, it was initially an American response to those phenomena, an indigenous reaction to the creative paucity of their own music scene which we took to its rapid and logical conclusion.

Punk is history now, and 1976 seems a long time ago. The first real indication of a new, more traditional American antidote to rock, resented as it was, came in a well-received album by R.E.M., *Reckoning* (1984). The authentic single "Don't Go Back to Rockville" came as a breath of fresh air that summer, a piece of pure Americana, but refracted through a sensibility which had absorbed not only native roots, but the influence of punk's garage-band aesthetic (most aurally evident on their previous record, *Murmur* (1983)). Listen, for example, to "Radio Free Europe". That breath has now turned to a flow of fresh yet familiar sounding American rock, and the bands who are making it have joined the list of distinguished visitors to these parts. R.E.M. themselves have toured once this year, and are set to do so again following the release of a magnificent third album, *Fables of the Reconstruction*.



R.E.M.

Going back to Rockville

by Kenny Mathieson

tion/Reconstruction of the Fables (1985), characterized by an understated subtlety that makes sense of comparisons with The Band, particularly that group's eponymous second album, still one of the few great landmarks in American rock music. They are the vanguard of a varied collection of bands who have, in their different ways, turned to older, allegedly exhausted forms and transformed them into something that sounds not only contemporary, but also exciting - a commodity in distinctly short supply in current popular music. Like R.E.M., Jason and the Scorchers are a Southern band; they eschew the former's approach, however, preferring a straight ahead rock and roll attack to their country-based songs that may ultimately prove more limited. The music fairly scorches even on vinyl, as *Lost and Found* (1984) demonstrates, but it is in live performance the band really excels; they, too, are set to return for a more extensive national follow-up to their recent London dates.

Los Angeles has been the centre of the most active resurgence, its cultural and ethnic ferment reflected in the

musical influences of the many bands currently emanating from (or congregating in) the city. Of these, The Long Ryders and Los Lobos have made the strongest impression, both on record and on stage. The Long Ryders' *Native Sons* (1984) draws directly on a diffuse range of influences (if anything, a little too overtly), with The Byrds and Bob Dylan the most prominent, but again delivered with a stinging, pared-down intensity that is distinctly post-punk - or perhaps just a full circle return to the early energy of their various sources, which punk itself sought to recapture. Hisker Duff, in London in September, are the band who most overtly reflect punk's musical influence.

Los Lobos draw as much on Mexican roots as on the barroom rock reminiscent of the recently revived Sir Douglas Quintet (whose leader, Doug Sahm, is another of America's great survivors), producing a distinctive ethnic sound that marks them out among the new LA bands. Their *How Will the Wolf Survive* (1984) suggests a drift in the direction of the latter pole, probably a reflection of their growing popularity outside the barrio. Not all

of the LA exports have proved as interesting: Green On Red, with their heavily derivative Velvet Underground pastiches, and the rambling Rain Parade, sound more like parodists than pioneers in a revitalized rock sound, although the former at least promise more.

Often over-inflated and predictable, American rock has at times presented an easy target for ridicule, but it remains an important musical and cultural form, one of the offshoots of a long tradition which began in the Blues and has, in its various branchings, produced arguably the most authentically American music. It is encouraging to hear so many new bands genuinely dedicated to resurrecting lost (or suppressed) musical and cultural values at a time when rock generally is at a low ebb; it is equally encouraging to hear one or two old heroes prove they can do likewise. Springsteen, of course, has always kept the faith, but who would have predicted that John Fogerty would return with a high quality (and huge selling) album like *Centerfield*? The spirit, it seems, is still abroad in those States after all.

Thieves of fire

Richard Burns welcomes some new poets

In 1871, an excited 17-year-old French schoolboy wrote a prophetic letter to his teacher about the future of poetry. "The poet truly is the thief of fire," he said. "And when the endless bondage of woman is broken, when she lives for herself and on her own behalf, once man (till now loathsome) has freed her from his service, then she will be a poet too! Woman will find out some of the unknown! Will her world of ideas be different from ours? - She will find weird, unfathomable, offensive, delicious things. And we will stand them, we will understand them."

That schoolboy was Arthur Rimbaud, obsessed with Baudelaire. Over a century later, in Thatcher's England, the poetry establishment is still dominated by male white Oxbridge graduates. But word-power belongs to us all, and women's voices are among the most articulate of those confronting official culture.

Virago has six new poetry paperbacks (all £2.95). Denise Riley's *Dry Air* conducts close research into "language as a sexed thing"; no cheap rhetorical tricks here, but surprise, depth and challenge, in the European tradition stretching from Hölderlin and Apollinaire to J.H. Prynne. Stef Pinxten's *Sawdust and White Spirit* has a flaring, compassionate zeal. Her poems inhabit an immediately recognizable London: "the Dalton Junction of the soul". From a world of shabby cafés, attic rooms, cement mixers and half-wild houses, she moulds beauty and celebrates womanhood.

In Let's Pretend, Judith Kazantzis ranges through similar zones - under the "innocent suburbia sky" at Shepherd's Bush, but also in Greece and Florida. In her treatment of union and separation, longing and loneliness, the eye is keen, the vision turbulent. Wary precision and sharp word play zigzag, too, through Alison Fell's *Kisses for Mayakovsky*. In the jungle or quiet moorland, out of the ache of the seasons/unstable bondage of the seasons and mothering, lust, dependence and fragile affairs, friendship and fragile affairs.

Two of the six Virago poets are black. Grace Nichols won the Commonwealth Poetry Prize in 1983. At the core of *The Fat Black Woman's Poems* are energy and defiance of the cult of white male dominance. The whole book is filled with the scent of hibiscus, and radiates humour, strength and generosity. Its underlying rhythms are those of Guyanese music, in echoing with mysterious laughter, in Long Road to Nowhere, Angeli Johnson hits back at British racism and sonnets back at British childhood, years for her Trinidadian childhood. Her poems in Creole have dignity and power, though elsewhere, her eloquence is marred by loose phrasing.

Grace Nichols also appears in an anthology of four black women poets (Sheba Feminist Publishers, £2.95). The title, *A Dangerous Knowledge*, comes from a poem by Barbara Burnett. Gabriela Pereira is volatile, exuberant, daring. Jackie Kay is wry and delicate by turns, but forthright in her depiction of gay experience. Finished poems from all these writers mingle unevenly with workshop pieces and raw polemic, but the book is a milestone for Britain's black poets, in the best traditions of cooperative and small press publishing.

In the vanguard of these voices is the earliest woman poet and, arguably, the greatest European love poet of all time: Greek Sappho, newly translated in paperback by Josephine Balmain (Brilliance Books, £2.95). The English touch is unfussy and accurate, and the introduction is scholarly. The poems, many of them fragments, speak wholly to our condition. "Muse has made me happy in my lifetime/and when I die I shall never be forgotten."

Classified Advertisements

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Nursery Education

Other Appointments

BERKSHIRE

WAVELLY SCHOOL
Ravenhill Avenue,
Crowthorne, Berks.
Required for January 1986, an enthusiastic Nursery teacher to work with a small class five mornings per week.
Please apply to the Head-teacher, Alan Arkless, with names and addresses of two referees. The successful applicant will work with a small team of Nursery teachers and N.N.E.S. (05881) 100026

BERKSHIRE

CHALVEY NURSERY SCHOOL
The Green, Chalvey, SL1 3BN
We need at the above Nursery School for January 1986, an enthusiastic Nursery teacher to work with a small class five mornings per week.
Please apply to the Head-teacher, Alan Arkless, with names and addresses of two referees. The successful applicant will work with a small team of Nursery teachers and N.N.E.S. (05881) 100026

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NEWHAM

LONDON BOROUGH OF

EDITH KERRISON NURSERY SCHOOL

100th Road, London E16 3PB
Head Teacher: Mrs. J. M. Childs
Number on roll: 180 Part-time places

NURSERY TEACHER Scale 1

Required January 1986. An enthusiastic nursery teacher to work with a small class five mornings per week.

Application forms (a.s.e. please) available from Director of Education to whom completed forms should be returned by 1.10.85.

Education Offices, 378/838 High Street, Stratford, E15 4RD.

AN Equal Opportunity Employer. (05001) 100026

NEWHAM

LONDON BOROUGH OF

MARYLAND INFANT SCHOOL

100th Road, London E16 3PB
Head Teacher: Mrs. J. M. Childs
Number on roll: 140 plus 60

TWO NURSERY TEACHERS Scale 1

Required January 1986 or as soon as possible thereafter. An enthusiastic nursery teacher to work with a small class five mornings per week.

Application forms (a.s.e. please) available from Director of Education to whom completed forms should be returned by 1.10.85.

Education Offices, 378/838 High Street, Stratford, E15 4RD.

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AN Equal Opportunity Employer. (05001) 100026

NEWHAM

LONDON BOROUGH OF

TOLLGATE INFANT SCHOOL

Barclay Road, London E13 8BA
Head Teacher: Mrs. J. M. Childs
Number on roll: 120 + 60

NURSERY TEACHER Scale 2

Required April 1986. An enthusiastic nursery teacher to work with a small class five mornings per week.

Application forms (a.s.e. please) available from Director of Education to whom completed forms should be returned by 1.10.85.

Education Offices, 378/838 High Street, Stratford, E15 4RD.

AN Equal Opportunity Employer. (05001) 100026

NEWHAM

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Number on roll: 120 + 60

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Education Offices, 378/838 High Street, Stratford, E15 4RD.

AN Equal Opportunity Employer. (05001) 100026

SANDWELL

METROPOLITAN BOROUGH OF

COUNCIL

Required as soon as possible. Infant and Nursery Teachers - Scale 1

Tel: 051-535 7366 (Schools section) for application forms. Completed forms to be returned immediately to Director of Education, Education Department, P.O. Box 41, West Bromwich, West Midlands.

Those equal opportunity employers who are members of the authority will be disqualified (04128) 100026

SHEFFIELD

CITY OF SHEFFIELD

EDUCATION DEPARTMENT

ABBEYDALE NURSERY FIRST SCHOOL

Kent Road, Sheffield S2 5BB
Required for January 1986, a teacher to take charge of a nursery class with 2 teachers and 2 nursery nurses. Applicants must be committed to working with parents and be able to work in a team. Scale 1 + 50% allowance.

Application forms and details are available from the Headteacher at the school, to whom they should be returned by 31st October (05066) 100026

SHEFFIELD

CITY OF SHEFFIELD

EDUCATION DEPARTMENT

EDBURY NURSERY FIRST SCHOOL

Kent Road, Sheffield S2 5BB
Required for January 1986, a teacher to take charge of a nursery class with 2 teachers and 2 nursery nurses. Applicants must be committed to working with parents and be able to work in a team. Scale 1 + 50% allowance.

Application forms and details are available from the Headteacher at the school, to whom they should be returned by 31st October (05066) 100026

SHEFFIELD

CITY OF SHEFFIELD

EDUCATION DEPARTMENT

GRACE OVEN NURSERY SCHOOL

Regent Row, Sheffield S2 5BB
Required for January 1986, a teacher to take charge of a class of 30 f.t.e. children and



SURREY COUNTY COUNCIL

★ FRINGE AREA LONDON ALLOWANCE £264 p.a. throughout the County.
★ Temporary housing may be available.
★ Generous relocation expenses in approved cases.

HEADSHIPS

FELBRIDGE COUNTY PRIMARY SCHOOL,
Felbridge, East Grinstead, Sussex.

Group 4, NOR Estimated for January 1986, 152.

HEADTEACHER required for April 1986 for this primary school for pupils aged 5-11 years.

Salary scale £11112 - £12384 p.a.

GODSTONE COUNTY FIRST SCHOOL,
Godstone.

Group 1, NOR January 1986, 45.

HEADTEACHER required from April 1986 for this first school for pupils aged 5-8 years.

Salary scale £9573 - £10653.

HORLEY COUNTY FIRST SCHOOL,
Horley.

Group 5, NOR Estimated for January 1986, 298 (expected to reduce to 240 in later years).

HEADTEACHER required for April 1986 for this first school which is due to be extensively remodelled commencing 1987/88.

Salary scale £12042 - £13317 p.a.

Application form and further details for all posts from the SE Area Education Officer, 123 Blackborough Road, Reigate, Tel. Radhill 68441.

Closing date: 8th November 1985.

(7815)



★ FRINGE AREA LONDON ALLOWANCE £264 p.a. throughout the County.
★ Temporary housing may be available.
★ Generous relocation expenses in approved cases.

HEADSHIPS

FELBRIDGE COUNTY PRIMARY SCHOOL,
Felbridge, East Grinstead, Sussex.

Group 4, NOR Estimated for January 1986, 152.

HEADTEACHER required for April 1986 for this primary school for pupils aged 5-11 years.

Salary scale £11112 - £12384 p.a.

GODSTONE COUNTY FIRST SCHOOL,
Godstone.

Group 1, NOR January 1986, 45.

Headteacher required from April 1986 for this first school for pupils aged 5-8 years.

Salary scale £9573 - £10653.

Application form and further details for both posts from the SE Area Education Officer, 123 Blackborough Road, Reigate, Surrey, Telephone Radhill 68441.

Closing date: 8th November 1985.

(7808)



Headship (Group 4)

JOHN GULSON INFANT SCHOOL,
George Street, Coventry CV1 4HB.

Required January 1986 or as soon as possible.

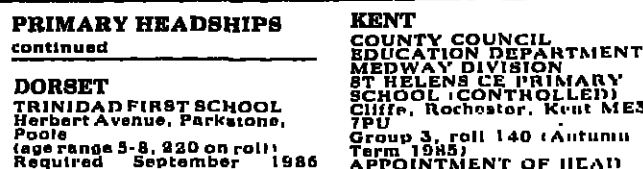
Applications are invited from experienced teachers for the above post, Group 4, plus Social Priority School Allowance (£201 or £276 per annum).

Application forms and further particulars from Director of Education, New Council Offices, Earl Street, Coventry CV1 5RS (telephone 0203 25555 ext 2404).

returnable by 8th November 1985.

Canvassing disqualified.

an equal opportunity employer



PRIMARY HEADSHIPS
continued

DORSET
TRINIDAD FIRST SCHOOL
Hartley Avenue, Parkstone, Poole

Group 3, roll 140 (Autumn Term 1985)

Application forms and details from the Director of Education, 123 Blackborough Road, Reigate, Surrey, Telephone Radhill 68441.

Closing date: 8th November 1985.

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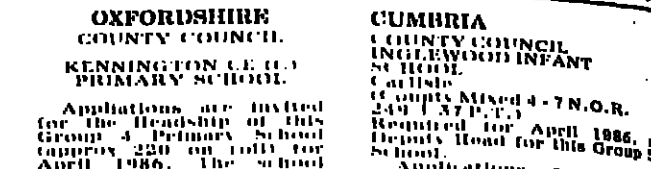
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OXFORDSHIRE
COUNTY COUNCIL
KENNINGTON C.I. (C) PRIMARY SCHOOL

Applications are invited for the post of Headteacher for this primary school for pupils aged 5-11 years.

Salary scale £11112 - £12384 p.a.

Application forms and further details from the Director of Education, 123 Blackborough Road, Reigate, Surrey, Telephone Radhill 68441.

Closing date: 8th November 1985.

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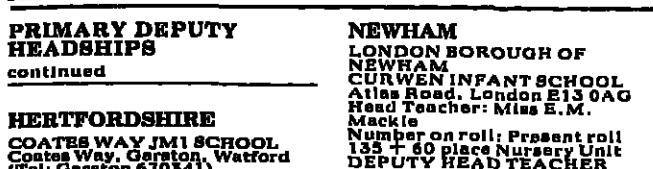
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PRIMARY DEPUTY HEADSHIPS
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HERTFORDSHIRE
COATES WAY (M1) SCHOOL
Coates Way, Watlington, Oxfordshire

Group 4, roll 140 (Autumn Term 1985)

Application forms and details from the Director of Education, 123 Blackborough Road, Reigate, Surrey, Telephone Radhill 68441.

Closing date: 8th November 1985.

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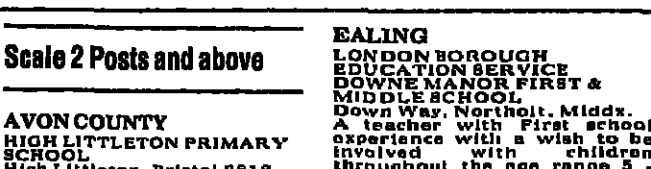
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Scale 2 Posts and above

AVON COUNTY
HIGH LITTLETON PRIMARY SCHOOL
High Littleton, Bristol BS18 5BT

Group 4, roll 140 (Autumn Term 1985)

Application forms and details from the Director of Education, 123 Blackborough Road, Reigate, Surrey, Telephone Radhill 68441.

Closing date: 8th November 1985.

(90444)

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SOCIALISM AT WORK

Tameside Metropolitan Borough
Education Department
PRIMARY SCHOOL VACANCIES
DEPUTY HEADTEACHER POSTS

DEPUTY HEADTEACHER — GROUP 4
HURST METHODIST JUNIOR SCHOOL,
ASHTON-UNDER-LYNE
DEPUTY HEADTEACHER — GROUP 4
 An enthusiastic teacher is required who can take the lead in developing teaching styles and learning strategies appropriate to developing curriculum sharing in the promotion of planned curriculum change.

**WILD BANK COUNTY PRIMARY SCHOOL
STALYBRIDGE
DEPUTY HEADTEACHER — GROUP 4**

An enthusiastic teacher needed for this open plan school with nursery class; an interest and expertise in language development would be an advantage.

SCALE POST
CLARENDON FIELD COUNTY PRIMARY SCHOOL
DUKINFIELD

SCALE 2

Teacher required to develop and co-ordinate the curriculum Mathematics and P.E.

SUPPORT SERVICE VACANCY

P.R.I.S.M. TEACHER OF FRENCH — SCAL
This is a temporary post from 20th January 1986 to 19th July 1986 due to maternity leave. The post entails teaching 1st Year classes in three secondary schools and Junior 4 pupils in five primary schools. Car essential. Mileage allowance paid.

Application forms and further details for the above posts obtainable from and returnable to Director of Education, Teachers Staffing Section, Council Offices, Wellington Road, Ashton-under-Lyne, Tameside, Greater Manchester OL6 7EJ. Closing date 8th November 1985. Ref: TE1054/TE8.

ASSISTANT TEACHER POSTS
ST. DAMIAN'S R.C. HIGH SCHOOL, LEES ROAD, ASHTON-UNDER-LYNE, TAMESIDE OL6 8
HEADTEACHER MR P G JACKSON B.A., M

TEL: 061-330-5974

SCALE 1 — HOME ECONOMICS

This is a temporary post to cover for a period of maternity leave.
28.11.85 to 28.5.86.

SCALE 1 — MATHS/GENERAL SCIENCE

This is a temporary post initially for one term. The teaching commitment will be mainly in the lower school.

ASHTON-UNDER-LYNE SIXTH FORM COLLEGE
DARLTON ROAD, ASHTON-UNDER-LYNE
TAMESIDE OL9 9RL. TEL: 061-330-2333
PRINCIPAL M.B.G. HIGGINS B.A. M. PH.D.

SCALE 1 — TEACHER OF ENGLISH

For two terms from January 1988. An ability to teach English Literature to 'A' Level and English Language to 'O' Level.

Application forms for the above two secondary posts available from and returnable to the School and College.

concerned. Closing date 8th November 1985.
Ref: TE1054/TES.

AN EQUAL OPPORTUNITY EMPLOYER

City of Birmingham
Education Department

Syng Kentish Central School, Gressall Lane, Birmingham, B33 9US
Tel. 021-737 776

Scale 1 teacher of Mathematics
Castle Vale School, Farnborough Road, Castle Vale, Birmingham,
Tel. 021-747 810

**Scale 1 temporary teacher of Religious Education (required from November
cover maternity leave.**

Scale 1 temporary teacher of Computer Studies and Information I
required from November 1988 to cover maternity leave.

Scale 1 Hill School, Cookehill Hill, Yardley, Birmingham, B26 2ST
Tel. 021-743 2670

Scale 1 Temporary teacher of Mathematics required immediately.
Fairfax School, Fairfax Road, Sutton Coldfield, B75 7UT.

Boals 1/2 temporary teacher required from 4th November 1985 to cover
city leave. To teach Commerce, Accounts and Economics to CSE/O
Battley School, Boffers Lane, Birmingham, B9 9PX.
Boals 1 Science - to teach General Science in Lower School and
Chemistry to G.C.S.E. level. Required immediately.
Closing date 8th November 1985.
Unless otherwise stated, application forms and further particulars available
Headteacher of the school concerned enclosing a.s.a.
An equal opportunities employer

WEST SUSSEX
BOUNDSTONE COMMUNITY
COLLEGE
Lancing

Required January 1986, Scale 1
1 Physics teacher (Scale 2 for
applicant with 2 years experi-
ence or more). Exceptionally
successful department with
very well established and sub-
scribed courses at A, O and
CSE levels with Integrated Sci-

and I thank your. Vacancy Order
promotion of present teachers
to Head of Department.
Application form from
Headmaster on receipt of
a.s.f.e. (90417) 134822

Heads of Department

**NOTTINGHAMSHIRE COUNTY COUNCIL
THE FOREST SCHOOL**
Gregory Boulevard
Nottingham N6 5PA
Mixed: 645 (11-16)
Male: 645 (16-18)
EDUCATION DEPARTMENT
(Scale 1)

An experienced and enthusiastic teacher is required for the post of **Head of Department** in the above department (History, Geography, Commerce, Religion, Education, Social Studies, Humanities).

Successful applicants should be able to offer a sound knowledge of his/her specialism would be preferred. T.A. pay only.

Please apply by letter, giving full curriculum vitae and three references, to the Director of Education, Nottingham City Council, 100 Victoria Road, Nottingham, N6 5PA.

**WILTSHIRE
EDUCATION COMMITTEE**
**WOOTTON BASSETT
SCHOOL**
Lime Kiln, Wootton
Bassett, Swindon SN4 7HD

**Acaducational
Comprehensive School for
1500 pupils aged 11 - 18**

**Tel: Swindon (0793)
852121**

**Required for January,
1986, or as soon as possible
thereafter. HEAD OF
SCHOOL. STUDIES
FACULTY (Scale 4 in the
Main School the Faculty has
responsibility for History,**

Geography, Religious Studies and an integrated Humanities course. In the Sixth Form Law, Economics and Geography are additional responsibilities. The Faculty has a lively programme of field work in all subjects. A willingness to take an active part in the pastoral work of the school is desirable.

The vacancy arises through promotion of the present holder to a Deputy Headship.

Application forms and
further details from the
Headmaster at the school.
S.A.E. please. 135018
(01344)

shire
Council
Employer.

Headteacher at the school. SAE please.
 (873 on Roll - Mixed). As soon as
SOCIAL

(749 on Roll - 138 Sixth form)
1986.
**PART-TIME THREE DAYS
PREFERRED.**
SAT 11:00

CONTROLLED)
Roll)

SUBJECTS

**MATICS AND
B TO C.S.E., 'O' LEVEL**

atics to C.S.E.

APPOINTMENTS IN SCOTLAND

continued

SECONDARY SCHOOLS PROMOTED POSTS

ASSISTANT PRINCIPAL TEACHER OF MODERN LANGUAGES

Hawick High School

Roll 1,264

Responsibility Payment £1,548 per annum

Application forms and further details may be obtained from the Personnel Department, Regional Headquarters, Newtown St. Boswells. Completed forms should be returned to Personnel Department.

PRINCIPAL TEACHER OF SOCIAL SUBJECTS

Jedburgh Grammar School

Roll 455

Responsibility Payment £1,808 per annum

(House is available)

TEACHING POSTS

ENGLISH

Kelloe High School

Roll 780

Galahead Academy (0.5) with

remaining (0.5) instrumental teacher

of violin or woodwind in various

schools

(Further details are available)

TEMPORARY POSTS

TEMPORARY TEACHER OF GEOGRAPHY

Berkshire High School, Duns

Roll 748

(November 1985 to end of session 1985/86)

TECHNICAL AND VOCATIONAL EDUCATION INITIATIVE (TVEI)

TUTOR IN INFORMATION STUDIES

Applications are invited from GTC registered teachers with qualifications and experience suitable for the post of Tutor in Information Studies for the TVEI Centre, Hawick. The post is open to applicants from a wide range of subject backgrounds and requires an enthusiastic professional with some knowledge of computers in education.

Responsibility payment £1,150 per annum.

Closing date 6 November 1985.

Application form and further details are available from the Personnel Department Regional Headquarters, Newtown St. Boswells. Completed forms should be returned to the Director of Education at Regional Headquarters.

REGIONAL COUNCIL

Borders

STRATHCLYDE REGIONAL COUNCIL DEPARTMENT OF EDUCATION Renfrew Division

FIELD STUDIES TEACHER

Ardentilly Outdoor Education Centre, Loch Long, by Dunoon, Argyll.

A vacancy exists for a registered teacher of biology (or having a science related degree with background in ecology) with practical experience in field studies and instructional competence in one or more of the following:—

Mountaineering, Orienteering, Canoeing and Sailing.

Salary: £6,150 — £9,885 Placing determined by experience.

Responsibility payment (as for APT in a school of 1500 pupils).

Application forms and job specification may be obtained from the Divisional Education Officer, Regional Offices, Cotton Street, Paisley, to whom completed forms should be returned by 11 November 1985.

EDWARD MILLER Director of Education

EDINBURGH

DUNFERMLINE COLLEGE OF PHYSICAL EDUCATION

Lectureship in Physical Education

Applications are invited for the new post of post-graduate level.

Candidates must have:

(i) a qualification in Physical Education;

(ii) recent experience in teaching children and/or adults with special needs;

(iii) a qualification in special educational needs.

The appointment will take effect from either 1 April or 1 September 1986.

The salary for the post will be determined in relation to the successful applicant's salary at the time of appointment and will be on the scale of £8,888 to £13,710 (currently under review).

Further particulars and application forms may be obtained from The Principal, Dunfermline College of Physical Education, 105 Monmouth Road North, Edinburgh EH4 6JD. Applications should be returned no later than 14 November 1985 (9.00am).

WIGTOWNSHIRE

WOODLANDS SCHOOL

Newton Stewart

Required for January or Easter 1986, two experienced, registered teachers for this mixed independent Residential List 'C' School.

POST A: All age Specific Learning Difficulties Group. The person appointed would be expected to develop, deliver and evaluate the implementation of Individual Work Programmes to overcome diagnosed difficulties.

POST B: A new position within the school. The person appointed will have specific responsibility for introducing the new Social & Vocational Studies' Standard Grade course into the senior curriculum.

The person appointed will be expected to work a maximum of 10 hours extra-curricular duties per week for which an appropriate allowance is made.

Applications by letter giving full C.V. particulars to The Head of School at the above address, or Tel: Newton Stewart 2480 for further details. 160022 (9.10.10).

WIGAN METROPOLITAN BOROUGH OF WIGAN

Required for Summer Term or September 1986

WIGAN WINSTANLEY COLLEGE

Winstanley Road, Orrell, Wigan, Lancashire W63 2AA

Tel: 0562 533444

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HEAD OF COMPUTING

Application forms and further particulars available from and returnable to the Principal at the above address, closing date: 14th November 1985. Ref: A45. (9.5.85)

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(9.5.85)

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LONDON BOROUGH OF BRENT

Education Committee

WILLESDEN COLLEGE OF TECHNOLOGY

Principal: A K Barnard BSc PhD CChem FRSC FRSA FColp

VICE-PRINCIPAL (RESOURCES)

Applications are invited for one of the two posts of VICE-PRINCIPAL in this large multi-ethnic College, which is concerned exclusively with studies in the fields of Engineering, Construction and Science. The successful candidate will join the central management team of the College and in addition to providing appropriate academic leadership will be expected to assume responsibility for the allocation and effective usage of the accommodation and resources, other than staff. The preparation of College estimates and related issues will be an important aspect of the job.

Candidates must have graduate or equivalent qualifications in an area appropriate to the work of the College, substantial experience in a College of Further and Higher Education, normally at Head of Department level, must be aware of current issues in A.F.E. and N.A.F.E. and must demonstrate an active commitment to racial and gender equality in education.

The vacancy arises due to the retirement of the current post-holder and will be available from 1 January 1986.

Salary Vice-Principal (Group B) £21,018 to £22,533 plus £1038 London Allowance.

We particularly welcome applications from women as well as men and women from black ethnic communities.

Application forms (enclosed) and further details of the post can be obtained from the Chief Administrative Officer, Willesden College of Technology, Denzil Road, London NW10 2XD (Tel: 01-461 3411).

Closing date: 15 November 1985.

Other Appointments

BERKSHIRE

ROYAL COLLEGE OF TECHNOLOGY

Applications are invited for

LECTURER I to teach

Building Services in the

Department of Building

Services, Reading, RG1 1AH.

Applications should be

returned to the Principal,

Reading RG1 1AH. Tel:

0116 83301.

An equal opportunity

employer. 220026

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Cheshire

The North West Education Management Centre
(Based at North Cheshire College, Warrington)

Deputy Director (Re-advertisement)

To commence at the beginning of the Summer Term 1986, N.W.E.M.C. is a well-established and major provider in the field of management development for Primary and Secondary School Headteachers and senior members of staff, principally for the 17 Local Education Authorities in the North West Region. The Centre has been a pioneer in this field and the post offers a challenging and exciting opportunity at a significant time for management work with schools.

Applicants should have current or previous experience of Primary School Headship, and of other spheres in the educational service.

Salary: £19,614 p.a.

Application forms and further details obtainable on receipt of a S.A.E. from The Director, N.W.E.M.C., North Cheshire College (Padgate Campus), Fearnhead, Warrington, WA2 0DB. Closing date Monday, November 18th, 1985.

BIRMINGHAM CITY COUNCIL

An Equal Opportunities Employer

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CAREERS SERVICE CAREERS OFFICER (FURTHER AND HIGHER EDUCATION) SO.1. £9,975 - £10,638 POST NO. CO803

Applications are invited for the above post based at the Careers Information Centre, Chelmsford, from persons with experience in the Careers Service and who also hold the Diploma in Careers Guidance.

The person appointed will be directly responsible to the Assistant Education Officer (Careers) and will be concerned, in co-operation with the Principals and Directors of Further and Higher Education Establishments, in developing careers guidance programmes for students attending those establishments. This will involve the organisation and co-ordination of County events such as an annual Higher Education Convention, in addition to being the responsible officer for co-ordinating the Advanced Further Education Information Service.

TRAINEE CAREERS OFFICER

SCALE 3 £8,234 - £8,766
POST NO. CO811

The Authority will sponsor a Trainee Careers Officer for a one-year full-time course leading to the award of the Diploma in Careers Guidance. Minimum entry qualifications are a degree or approved Diploma or in the case of candidates aged at least 25, five years relevant employment experience with the potential to successfully complete a one year course of full time study.

Candidates completing the Diploma course may be subsequently appointed to a Careers Officer (Main Grade) post, Scale 5 (£9,920 - £8,897).

The duties of a Careers Officer are varied and rewarding and include giving vocational guidance to young people in schools and counselling and guidance for the young unemployed.

Closing date: 15 November, 1985.

Application forms and further details (SAE please) available from the County Education Officer (F), P.O. Box 47, Three-Needle House, Market Road, Chelmsford CM1 1LD (Chelmsford 267222 Ext. 2626).



SENIOR ADMINISTRATIVE OFFICER

Ref. no: EDU/1023

Salary Grade: SO1 £9,975 - £10,638

Assistance with removal expenses where appropriate.

This is an important post in the Teacher Staffing Section, and carries responsibility for matters relating to the appointment and Conditions of Service of teachers staff across the County, together with general oversight of other duties in the Unit, including supervision and training of the administrative and clerical staff support of the unit.

Applicants should preferably hold the BEC Higher Certificate and/or a relevant degree, or suitable experience.

Further details and application form, returnable by 16th November, from Director of Personnel (Tel. Bristol 298965 - Answer on this number after office hours), PO Box 270, Avon House, The Haymarket, Bristol, BS99 7HE.

Please quote reference number.

Education Department (7078)

Avon as an Equal Opportunities employer considers applicants on their suitability for the post, regardless of sex, race, disability or sexual orientation.



Northumberland County Council EDUCATION DEPARTMENT

Northumberland County Technical College,
College Road, Ashington, NE33 9RG

Readvertisement (previous applicants need not re-apply).
Applications invited to fill the following vacancy from 1 January 1986 or a.s.p. thereafter:

Chief Administrative Officer £14,025 - £15,111 p.a.

This is a key post in a Group V College which is implementing a reorganisation of its academic and administrative structure. It presents an excellent opportunity for a person with leadership and administrative skills to act as Head of the Administrative Department and as a member of the College Management Committee.

Applicants should possess knowledge of modern administrative and financial systems, and have substantial experience of College and/or local authority administration.

Salary scale is £14,025 - £15,111 and NJO Conditions of Service will apply. A lodging allowance and removal expenses may be payable in approved cases.

Application forms and further particulars can be obtained from the Principal, Northumberland County Technical College, College Road, Ashington, Northumberland, NE33 9RG, by forwarding a request s.a.e. to whom completed forms should be returned by Friday 15 November 1985.

Administration (L.E.A.) continued

SENIOR CAREERS OFFICER

Salary: Scale 6 - range
£9,636 to £10,248
per annum inclusive

We require a qualified Careers Officer to further develop careers work with students in Further and Higher Education. The local College of Technology has a student population of over 1500 full-time and over 2000 part-time students.

The work in this area is well advanced, but continual liaison with staff and students is seen as a priority. In addition, the person appointed to this post will be expected to co-ordinate the provision of a guidance service for adults and take part in joint projects relating to Information, Employment and Unemployment Services.

Bexley has one of the most up-to-date Careers Centres in the country with a first class Careers Library and with well advanced computerised facilities.

CAREERS OFFICERS

(TWO POSTS)

Salary: Scale 5 - range
£8,577 to £9,354
per annum inclusive.

Applications are invited for the posts of qualified Careers Officers who must be in possession of, or likely to obtain, the Diploma in Careers Guidance or its equivalent.

The successful applicants will undertake the full range of duties in the Careers Service, including work in Schools, work with employers and work under the Youth Training Scheme.

Many aspects of the Careers Service work are computerised and therefore an interest in computer systems is necessary which training will be given. The Bexley Careers Centre is situated in the centre of Bexleyheath and forms part of the new Civic Office development. It is a modern up-to-date office and has 16 Careers Officers and 10 Support Staff.

Application forms for all posts are obtainable from the Educational Services Secretary, Directorate of Education, Town Hall, Crayford, Kent DA1 4EN. Tel: 01-303 7777 Ext. 642/643. Closing date: 8th November, 1985.

Applications from employees of the GLC or MCC's with relevant experience would be welcome. These posts carry Casual Car User Allowances. Relocation assistance and other benefits available.

(7533)



ilea Inner London Education Authority

TEMPORARY INSPECTOR FOR HOME ECONOMICS & CATERING

Salary Range: £15,972-£17,928

£1,494 London Weighting Allowance

Applicants must demonstrate a thorough understanding of education practice and have a commitment to the Authority's policies on equality of opportunity (race, sex, class).

To join the team of Inspectors responsible for food, textiles and family education for one year on a temporary basis from January 1st to December 31st 1986. Applicants should have substantial teaching experience and be able to make a contribution to curriculum development preferably in the area of home economics for the 16-18 age group. The team has a remit across the Authority and full phases and a record of achievement in equal opportunities is important.

Suitable for Job Share.

Application forms and further details are available from the Personnel Services Division (EO/ESTAB 18), Room 366, The County Hall, London SE1 7PB. Please enclose a SAE. Closing date for the return of completed applications is 15 November 1985.

ILEA IS AN EQUAL OPPORTUNITIES EMPLOYER



PROFESSIONAL ASSISTANT

Salary £13,170 - £14,319 p.a.

(with possible progression after 1 year to a scale with a maximum of £15,416 p.a.)

Applications are sought for energetic and well organised graduates with at least five years successful teaching experience who wish to pursue a career in educational administration at a professional level.

Applications from employees of the GLC and MCCs with relevant experience will be welcome.

Please quote reference: ED 656

Closing date: 15.11.85.

Application forms obtainable from personnel office, Room A204, Town Hall Annex, New Broadway, Ealing W5 2BY. Telephone (01) 846 1095 (24 hour service).

All salaries are inclusive of London weighting allowance.

All posts are open to male and female applicants unless otherwise stated.

Special consideration will be given to disabled persons whose qualifications and/or experience are relevant to the post for which they apply.

(7512)

Leicestershire

EDUCATION COMMITTEE

CHIEF ADVISER

SOULBURY - BURNHAM HT GP 12

£19,437 - £20,706 p.a.

Applications are invited from suitably qualified and experienced persons for this newly established post.

Telephone for application forms and further particulars on Leicester 871313, ext. 7177, returnable by 8th November, 1985 to the Director of Education, Room 25, County Hall, Glenfield, Leicester LE3 8RF.

EQUAL OPPORTUNITIES POLICY

Applications are welcome from suitably qualified and experienced persons regardless of race, ethnic origin, religion, sex, marital status or disability.

Oxfordshire County Council Education Department

Assistant Adviser for Further Education

Salary: - Soulbury H.T. Group 9
(£15,792 - £17,112)
pay award pending

The person appointed will be responsible to the Chief Education Officer for professional advice on all aspects of vocational non-advanced Further Education. Applicants must have recent experience in Further Education.

Application forms and further details are obtainable by writing to the Chief Education Officer, Oxfordshire County Council, Macleodfield House, New Road, Oxford, OX1 1NA, to whom completed forms should be returned by 15th November, 1985.

ADMINISTRATION - LEA

continued

LANCASHIRE

COUNTY COUNCIL CAREERS SERVICE

AN EQUAL OPPORTUNITIES EMPLOYER
We have a vacancy for an experienced, enthusiastic and motivated Careers Adviser in our Basingstoke Careers Office, Basingstoke, Hampshire. The post is in a challenging and stimulating environment in which a career development is possible.

In addition to training and support for probationers, we offer a minimum salary of £5,500 with accelerated progression to the end of the probationary year. Assisting with removal expenses will be payable in approved cases. Experienced careers advisers are paid on Scale 3/6.

For further details and application form please contact: Divisional Careers Officer, Divisional Offices, 9-11 Church Street, Basingstoke, RG21 2AA, or Tel: Basingstoke 6870.

Closing date: 7th November 1985. (90478) 480000

Administration General

EXETER

BURSAR

THE WEST OF ENGLAND SCHOOL for children with little or no sight.

The Governors wish to appoint a successor to Arthur Burgess, who retires in July, 1986. The school is a non-maintained special school with a reputation for educating blind and severely sighted children. Currently there are 100 boarders and 45 day pupils and 18 staff.

In September, 1986 the school will open a Further Education Department to cater for 15 to 20 students aged 16-18.

Interviews are planned for November, 1985.

For full details write to the Headmaster, The West of England School, Countess Way, Exeter EX2 5HA (90478) 500000

Department of Education and Science

HM Inspectors of Schools

Applications are invited from men and women, preferably aged between 35 and 45, for appointment in England as HM Inspectors. HMI inspect educational institutions as part of both general and specialist assignments and provide advice to the Department and throughout the education system.

Current vacancies are for specialists in:

Further and Higher Education

For all these posts a appropriate academic and professional qualifications are required together with substantial teaching and industrial/commercial/professional experience.

Agriculture and Horticulture ref: 1/86

Applicants who can also offer an engineering or scientific background would have an advantage.

Art and Design ref: 2/86

Applicants should have a broad interest across the field of art and design studies at different levels. Experience of fine art teaching at degree level or of film and photography courses would be an advantage.

Business and Management Studies: Accountancy ref: 3/86

Applicants should have a professional qualification from a major accountancy body and experience of teaching accounting at professional and/or degree level.

Business and Management Studies: Law ref: 4/86

Applicants should have experience of teaching law at degree level. Experience in the development of BTEC Higher National Diploma courses would be an advantage.

Construction ref: 5/86

Applicants should have a degree and/or an equivalent professional qualification. Applications from Architects, Civil Engineers and Quantity Surveyors would be welcomed.

Engineering ref: 6/86

Applicants should have a background in one or more of the following fields:

Design and Manufacturing Engineering, Motor Vehicle, Fabrication and Welding Engineering, Electrical Power Engineering.

Health Studies ref: 7/86

Applicants should hold a recognised qualification in a nursing discipline and have a knowledge of nursing and paramedical education and child and community care courses.

Science ref: 8/86

Applicants are sought from physicists and chemists. Knowledge of computing and electronics would be an advantage.

Mathematics and Computing ref: 9/86

Applicants should be able to offer mathematics or computing as a major subject discipline. Particular interest and experience in an area of computer application e.g. information technology, or in the field of mathematical sciences would be an advantage.

Starting salary for all posts is within the range £17,000-£22,900. Relocation expenses of up to £5,000 may be payable.

Application forms (to be returned as soon as possible and not later than 15 November 1985) and further information may be obtained from Mrs S. Willis, Department of Education and Science, 29 York Road, London, SE1 7PH. Telephone: 01-934 0798/0799/0800.

The Civil Service is an equal opportunities employer.

HAMPSHIRE

CAREERS SERVICE COMMITTEE

CAREERS OFFICER

SALE OF £10,591
We have a vacancy for an experienced, enthusiastic and motivated Careers Adviser in our Basingstoke Careers Office, Basingstoke, Hampshire. The post is in a challenging and stimulating environment in which a career development is possible.

In addition to training and support for probationers, we offer a minimum salary of £5,500 with accelerated progression to the end of the probationary year. Assisting with removal expenses will be payable in approved cases. Experienced careers advisers are paid on Scale 3/6.

For further details and application form please contact: Divisional Careers Officer, Divisional Offices, 9-11 Church Street, Basingstoke, RG21 2AA, or Tel: Basingstoke 6870.

Closing date: 7th November 1985. (90478) 480000

OLDHAM

HESTAIR HOPE LIMITED

ADMINISTRATIVE ASSISTANT

A vacancy has arisen in development department for an Administrative Assistant, to handle all the administrative work involved in the production of the Education Catalogue.

Eventually it is envisaged that the successful applicant will become more involved in the product selection and production of defined product sections.

Applicants should have teaching experience and the personality necessary to deal with school contacts and also be able to drive.

Please apply in writing with full career details to: Mr G. G. Grimwood, Marketing Manager - Education, Hestair Hope Limited, St. Philips Dr. 1, Royton, Oldham OL2 6AU. (90478) 500000

HUMBERSIDE

COUNTY COUNCIL

EDUCATION DEPARTMENT

GENERAL ADVISER

(For Compulsory Education) 001688

With a special interest in Business Education

Applicants should have appropriate qualifications and experience to assist in the work of the Advisory Teacher generally throughout the Post Compulsory sector. Special experience in BUSINESS EDUCATION, including the use of modern information technology, is required and in this field the Adviser's responsibilities will also cover work in schools particularly in the 15-16 age range.

Experience in both schools and colleges of further education would be an advantage and candidates will be expected to demonstrate a working knowledge and appreciation of the effects of technological change on business education and its development.

To obtain application forms please write enclosing a stamped addressed envelope to the Director of Education, Staffing Section, County Hall, Beverley, N. Humberside, HU1 1JA.

The Closing Date is 11th November 1985.

All applicants are considered on the basis of their suitability for the job irrespective of disability, race, creed, sex, marital status, disabled candidates whose applications have the written support of their D.R.O. will be guaranteed an interview. (95503) 480000

Technical Training Managers

The Crown Agents is a Public Corporation, providing commercial, financial and professional services to Governments and Public Bodies overseas.

Four positions are available, based in Sutton, Surrey, which will involve some overseas travel.

Applications are invited from suitably qualified and experienced trainers in the following disciplines:

- Supply and Materials Management
- Purchasing and Procurement
- Civil Engineering
- Management and Trainer Development

Age indicator 30-50. Starting salaries in the range £13,000 - £17,250. Package includes pension scheme and life insurance. Relocation assistance where appropriate.

Please send CV's to: Director, Training Services

Crown Agents

Crown Agents for Oversea Governments & Administrations, Personnel Division, St. Nicholas House, Sutton, Surrey SM1 1EL.

The Crown Agents is an Equal Opportunities Employer.

COVENTRY P.A.C.E.

(Project for Alternative Community Experience)

SENIOR PROJECT WORKER (EDUCATION)

Salary £8970 - £10638 subject to assessment at £9561.

P.A.C.E. is an innovative community based project which provides a range of imaginative alternatives to custody/care programmes for fifteen young people aged between 12-18. We seek an enthusiastic, creative person to manage and develop a range of educational, social and life skills programmes offered by the project. We require a qualified teacher with proven ability to relate positively to and work effectively with young people. Knowledge and experience of working with young people with special educational needs would be an advantage. The Church of England Children's Society is a Christian organisation which seeks to meet a need to grow in Christian faith and life.

Informal enquiries to Gerry Snowden, Project Leader, telephone (0203) 221877/22212. Application forms/job descriptions from Coventry P.A.C.E., 114 St. Nicholas Street, Coventry CV1 4BT. (Large S.A.E. appreciated.) (7513)

The Children's Society



OAKHAM SCHOOL

Appointment of Bursar

Applications are invited for the appointment which will fall vacant from 1st September 1986.

Oakham School is one of the leading independent co-educational schools in the United Kingdom, with 950 boys and girls of whom two thirds are boarders and one third are day pupils.

The Trustees will appoint an experienced person who is able not only to demonstrate financial flair, but also the managerial skills which this appointment demands.

An attractive salary and benefits will be offered commensurate with this challenging post.

Further details may be obtained from The Clerk to The Trustees of Oakham School, Chapel Close, Oakham, Rutland LE15 6DT.

NATIONAL FOUNDATION FOR EDUCATIONAL RESEARCH IN ENGLAND AND WALES



Assistant Research Officer

Applications are invited for the post of Assistant Research Officer on a two-year DHSS sponsored project which is exploring the training needs of specialist social services staff in visual handicap. The project started on 1st October 1985, and the appointment, which is to start on 1st January 1986, will last until the end of the project in September 1987.

The Assistant Research Officer appointed will be required to conduct interviews with staff trainers, students, specialist staff (mobility officers and technical officers), managers and clients, assist with the design of a questionnaire to technical officers and mobility officers, and contribute to the preparation of the project's final report.

Applicants should normally possess a good honours degree and preferably have some research experience. Knowledge of social services provision for the visually handicapped would be useful. The project will be based in Slough, but a certain amount of travel will be necessary.

Salary Scale: £8,365 to £8,685. This scale is under review and placement will be according to qualifications and experience.

For application form and further particulars, please apply to the Personnel Office, National Foundation for Educational Research in England and Wales, The Mere, Upton Park, Slough, Berkshire SL1 2DQ. Telephone Slough 74123.

Closing date for return of completed application forms, no later than Tuesday 12th November 1985. (7572)

CHRISTIAN AID

invites applications from lay or ordained men or women for the post of

AREA SECRETARY

for

Gloucestershire, Herefordshire and Worcestershire

Commitment to issues of poverty and development from Christian standpoint needed.

Also proven skills in communicating with wide range of people. Car driver essential.

Application form and job description from the Personnel Officer, Christian Aid, PO Box No. 1, London SW9 8BH. Apply in writing only.

Closing date 15th November.

(7513)

Educational Psychologists

MIDGLAMORGAN COUNTY COUNCIL - EDUCATION DEPARTMENT RHONDDA VANGUARD PROJECT

Required as soon as possible: EDUCATIONAL PSYCHOLOGIST (SPECIALIST POST) - ALL WELSH STRATEGY FOR THE MENTALLY HANDICAPPED

The Rhondda Vanguard Project has been initiated to develop services for people with mental handicap as a pilot area for the All Wales Strategy. The post will involve working in a multi-disciplinary team comprising personnel from Education, Health and Social Services. Applicants must be graduates of an approved university with a First or Second Class Honours or equivalent degree in Psychology, who have successfully pursued a post-graduate course in Educational Psychology, and have at least two years' recognised full-time teaching experience. APPLICATION OF SERVICE CANDIDATES WILL BE DISQUALIFIED if they are currently employed by a Local Authority or if they are currently employed by a Local Authority. Applications should be sent to the Director of Education, Mid Glamorgan County Council, Cathays Park, Cardiff, CF1 1NF. X.S. Hopkins, Director of Education (190375) 560000

Educational Psychologists

Derbyshire County Council is seeking to make two appointments to all areas of the County, based in Buxton, Chesterfield, Derby and Ripley. These additional posts have been created to enable the Psychological Service to fulfil the full range of responsibilities towards children, families and schools (both mainstream and special) and other services for children. Derbyshire has positive policies and rapidly developing systems and provision for meeting special educational needs, and the Educational Psychologists are regarded as having a key role in the implementation of this. One post (male) will relate to the development and delivery of services for the 16-18 age range. One post (female) will relate to the development and delivery of services for children of ethnic minority groups, and applications from Psychologists who are themselves of minority groups will be particularly welcomed. One post (female) will have a substantial commitment to the Paediatric Assessment Centre. Applications from Psychologists with specialist expertise in severe learning difficulties, specific learning difficulties, autism, in-service training and remedial intervention projects are invited and there will be opportunities for a degree of specialisation in these and other areas. Staffing levels will ensure that all posts offer exceptional opportunities for professional development and professional satisfaction. The salary will be within the Educational Psychologists Scale £2,898-£4,879 per annum. Applications from Psychologists wishing to work part-time (1/5) will also be considered. Applicants should be fully qualified by an Honours Degree in Psychology (or equivalent acceptable to EPB), teaching experience and a further professional qualification. Closing date for applications: 22 November 1985. Application forms and particulars for the above posts (2.5 x foolscap please) from the Director of Education, County Offices, Leake, Derbyshire, DE4 3AG.

DERBYSHIRE COUNTY COUNCIL IS AN EQUAL OPPORTUNITY EMPLOYER.

DERBYSHIRE
County Council

Education Department Principal Educational Psychologist

Salary Southbury Headteacher Group 9 (£15,792-£17,112) p.a.

A fully qualified and experienced Educational Psychologist with a proven record of achievement is required to lead Oldham's developing schools psychological service following the promotion of the previous postholder. The service is well known for the exceptional quality of its work and the successful candidate will be required to build upon existing practice and initiate further development. A strong combination of academic knowledge, professional and management skills is essential for this post. Oldham is situated within easy reach of Manchester with its excellent road and rail links to all parts of the country and is bounded by the unspoilt beauty of the Pennine Chain. Informal enquiries to Mr. R. Teague Tel. 061-678 4276 previous applications remain under consideration. Further particulars and application forms available from Director of Education, Old Town Hall, Middleton Road, Chadderton, Oldham OL9 6PT. Closing date 8th November 1985.

Oldham Metropolitan Borough
An Equal Opportunity Employer

Examiners

THE ASSOCIATION OF LEGAL SECRETARIES

APPOINTMENT OF MODERATORS OF LEGAL SECRETARIES CERTIFICATE

1. OFFICE PRACTICE
2. LEGAL TYPEWRITING
3. ECONOMICS
4. LAW

LEGAL SECRETARIES DIPLOMA

1. SECRETARIAL PRACTICE & BUSINESS COMMUNICATIONS

2. LEGAL TYPEWRITING

3. ECONOMIC ASPECTS OF BUSINESS

4. LAW

Further information and application forms may be obtained from The Secretary General, The Association of Legal Secretaries, The M.I. Canning Street, Nr. Little Clive, Warwick, CV3 9NF. SRN (Tel: 0903 714276).

Completed forms should be returned to the Board by 22nd November 1985. 600000

ROYAL SOCIETY OF EXAMINATIONS BOARD

DIPLOMA IN THE TEACHING OF COMMUNITY LANGUAGES

APPOINTMENT OF ASSESSORS/EXAMINERS

Applications are invited from those suitably qualified for appointment as Assessors for the Practical Teaching Test and Examiners for the Written Examination in the following community languages: Arabic (Moroccan), Bengali, Greek, Gujarati, Hindi, Punjabi, Tamil and Urdu.

Further information and application forms available from Mr. B. Belmont, RSA, John Adam St., London WC2N 6EZ. (Tel: 550 5151). 600000

THE ASSOCIATED EXAMINING BOARD

The Board invites applications for the following posts for the 1986 examinations:

1. PROJECT MODERATOR for COMPUTER SCIENCE (643) at ADVANCED LEVEL.
2. ASSISTANT EXAMINER for COMPUTER SCIENCE (643) at ADVANCED LEVEL.
3. PROJECT MODERATOR for LOGICAL SECRETARIES (643) at ORDINARY LEVEL.
4. ASSISTANT EXAMINER for LOGICAL SECRETARIES (643) at ORDINARY LEVEL.

Applicants should have a degree or equivalent qualification in a relevant subject and a minimum of four years' recent relevant teaching experience. The post of Project Moderator should also have experience of examining.

Further information and application forms may be obtained from The Secretary General, The Associated Examining Board, 15, St. Hill House, Guildford, Surrey, GU1 1AA. (04461) 600000

Outdoor Education

CALSHOT ACTIVITIES CENTRE

SAILING INSTRUCTOR

Applications are invited for the above post from those qualified and experienced in the teaching and direction of dinghy sailing at all levels. Candidates will be required to have a V.A. Senior Instructor or Coach status and a proven background of responsibility in this field.

The post will require a wide interest in other Outdoor Pursuits skills and training will take place where necessary.

Conditions of Service are based on JNC Youth and Community scales £6,350 - £9,650 and there is an extensive allowance payable of £2,500.

Appointments will be made on a 3 year renewable contract. Previous applicants should not re-apply.

Applicants should submit a curriculum vitae and further details available from The Director, Calshot Activities Centre, Calshot Spit, Fawley, Southampton SO41 1JG. Tel: 0703 892077. (01367) 680000

DEVON

SKERN LODGE

Qualified instructor drivers required for March 1986. Interviews by arrangement. R.V.A. Tidal Instructors and/or Climbing Instructors (B.C.U. S.I. or T.I.). Tel: John Watson, Skern Lodge Outdoor Centre, Bideford, Devon, EX39 1NG. 09373 75992. (16113) 680000

DEVON

SKERN LODGE OUTDOOR CENTRE

Excellent value for money adventure activities programmes. Tel: 09373 75992. (16113) 680000

KINGSLEY ADVENTURE SCHOOL

North Devon holiday and run by ex-teaching couple. Telephone for our details: 09373 70571. (06303) 680000

PEMBROKE

ADVENTURE SCHOOL

Experienced instructors required March - Sept. 1986. Experienced in climbing, canoeing, and general activities. Apply with C.V. Drivers only. Tel: 09373 70571. (06303) 680000

WOLVERHAMPTON BOROUGH COUNCIL

EDUCATION DEPARTMENT

1) Senior Educational Psychologist, (£14,884 - £16,983)

Soulbury/SEP (HT8)

This is a new post, created to meet the increased commitments of the service.

The postholder will be responsible for the co-ordination of educational services to an area of the town and, dependent on special interest, to stimulate and initiate activities within these spheres of specialism. A commitment to a team approach is essential.

2) Educational Psychologist, Soulbury/EP (QT4/HT7) (£11,931 - £14,976)

This is a new post, created to meet the increased commitments of the service.

Applications are invited from fully qualified Educational Psychologists. The successful applicants will be responsible for providing a psychological service to a designated area of the town, working with schools and other agencies in identifying and meeting the needs of children and their families.

The postholder will also have the opportunity of working in specialist teams to complement their area work. A commitment to a team approach is essential.

Further particulars and application forms from Director of Education, Civic Centre, St. Peter's Square, Wolverhampton, WV1 1RR.

Closing date: 20th November, 1985.

Informal enquiries to Bruce Lee, Chief Educational Psychologist, The Cadars, 39 Compton Road West, Wolverhampton, WV3 8DW. Telephone: W/son 24230.

Wolverhampton Council welcomes applications from all sections of the Community, irrespective of an individual's sex, ethnic origin or colour and from people with disabilities who have the necessary attributes to do the job.

Application from employees of the GLC or M.C.C.'s with relevant experience will be welcome.

WOLVERHAMPTON

the post holder

WOLVERHAMPTON

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WOLVERHAMPTON

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WOLVERHAMPTON

SOUTH DEVON

COURTLANDS CENTRE

Applications are invited for the following posts: Field Courses, Outdoor Pursuits, Canoeing and Mountaineering. Contact the Course Manager, Courtlands Centre, 106441 (196441) 680000

English as a Foreign Language

RESIDENTIAL INTERNATIONAL SUMMER SCHOOLS

Full-time residential courses required for January 1986 to assist in preparing for and running junior residential courses in Bournemouth.

The ideal candidate would be a single graduate, in the 30's with experience of residential courses and proven ability to organise, supervise and evaluate. Knowledge and experience of TEFL a distinct advantage.

For further details Tel: Anglo-Continental, Bournemouth (0202) 57514, Ext. 241/242. (01376) 700000

SUMMER JUNIOR COURSE

TEACHING AND RE-TEACHING

SENIOR STAFF required for residential courses in Bournemouth to organise sports activities, swimming, canoeing, etc. in June, July and August for young foreign children and teachers attending English Language Courses. Applicants should be suitably qualified and have previous experience with a good record of administrative ability.

Teachers should be qualified with TEFL training and/or experience.

For further details Tel: Anglo-Continental, Bournemouth (0202) 57514, Ext. 241/242. (01376) 700000

LONDON AND EAST ANGLIAN GROUP FOR THE GCSE EXAMINATION

East Anglian Examinations Board London Regional Examining Board University of London School Examinations Board

General Certificate of Secondary Education Examination

Appointment of Chief Examiners

Applications are invited for the following Chief Examiner appointments for June 1988 and, where appropriate, the following winter examinations. Applicants should be graduates or hold appropriate qualifications and should be under 65 with five years' recent teaching experience. Examining experience is essential. Application forms and further details may be obtained from the addresses indicated below to which completed application forms should be returned by 22 November 1985.

Electronics, syllabus B

Nautical Subjects (General Maritime Knowledge, Navigation, Meteorology and Oceanography)

Physics, syllabus A

Technology

Details from: The Secretary, East Anglian Examinations Board, 'The Lintons' Lexden Road Colchester CO3 3RL

Art, Design and Crafts

Computer Studies

Environmental Studies

Mathematics

Sociology

Details from: The Secretary, London Regional Examining Board, Lion House, 104 Wandsworth High Street, London SW18 4LP

Biology, syllabus A & B

Chemistry, syllabus B

Geology

History, syllabus A, B, C and D

Details from: The Secretary, University of London School Examinations Board, Stewart House, (Room 215), 32 Russell Square, London WC1B 6DN.

SCHOOL JOURNEYS & ACTIVITY COURSES

'in beautiful Pembrokeshire' for 8-18 year olds

Prices from £58 for further details

Sealyham Activity Centre, Wolfcastle, Haverfordwest, Dyfed SA62 5NF. Tel: 0348 840763

SPAIN

TEFL Teacher required immediately by well-established language school in Barcelona. Details, curriculum vitae, references, etc. to: South West, Tel: 01-340 063222, 0632 041533. 700000

English as a Second Language

RICHMOND UPON THAMES

London Regional Examining Board

An equal opportunity

F.S.I. UNIT, BANSTANT STANLEY JUNIOR SCHOOL, STANLEY, LONDON E15 3JH. Tel: 01-350 063222, 0632 041533. 700000

Somerset County Council

ADVISORY TEACHERS (4) FOR "TRIST" (TVEI Related In-Service Training)

Somerset LEA has made a successful bid to MSC for funds under the TRIST scheme to promote intensive in-service training over the next two years in a wide range of curriculum areas. To play a major role in the delivery of the programme, we wish to appoint four advisory teachers (Scale 4) to work in the following areas:-

- (i) Technology and Science. (1)
- (ii) Information Technology. (1)
- (iii) School-Industry Links. (2)

TECHNOLOGY AND SCIENCE.

The successful applicant will have had recent experience as a teacher in CDT Technology; preferably will have had some recent experience of INSET work; will have had industrial experience via apprenticeship, secondment or placement.

INFORMATION TECHNOLOGY.

The successful applicant will have had wide experience of information technology and its application to education; will be able to demonstrate a commitment to the need for the integration of information technology into and across the curriculum; will preferably have had recent experience of INSET work.

SCHOOL - INDUSTRY LINKS.

The successful applicants will be experienced and adaptable teachers able to support and motivate colleagues from a variety of disciplines. Between them the two Advisory Teachers will be able to offer expertise in:- group work/active learning; role-play and other educational drama techniques; writing strategies; career/work experience; personal and social education and/or humanities/social sciences.

These four appointments are for a period of five terms in the first instance, commencing January 1986. Start dates later than January 1986 will be considered, for suitably reduced periods.

Application forms and details (SAE please) from the Staffing (T) Section, Education Department, County Hall, Taunton TA1 4DY.

Closing date 15th November 1985. (7882)

THE TIMES EDUCATIONAL SUPPLEMENT 25.10.85

Miscellaneous

A SALES CAREER with Sun Life Assurance Company of Canada.

Suitable applicants may be employed in the area of their choice. Phone 01-350 063222, 0632 041533. Write Mr. R.J. Colley, 2/4, Capspur Street, London SW1V 2BH. (01350) 680000

Are you an unsettled teacher in an unsettled profession?

Can you hope for satisfying career development when there are simply not enough jobs to go round?

We can offer you rewarding alternatives that will make full use of your hard-earned communication, and management skills. Windsor is an established and expanding company with an impressive record of success. Every year we train men and women from differing professions to equip them for a new career in financial services.

Financial rewards are high and job satisfaction considerable. To find out more, explore the alternatives by contacting a Windsor representative on 01753 56144.

or writing to Windsor Life, Royal Albert House, Windsor, Berks. SL4 1BE. 660000 (01017)

FED UP? SORED? CAN'T FIND A JOB? Now You Can.

Can. Fully residential courses to train as a D.T. Approved Driving Instructor, teaching on one to one basis. Full details of this New Teaching Career. Ring 0778 251686, or write Triangle Training, 10 Eastlands, 10 Eastlands, Preston PR5 3BX. (05400) 660000

Somerset County Council

ADVISORY TEACHERS (4) FOR "TRIST" (TVEI Related In-Service Training)

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Application forms and details (SAE please) from the Staffing (T) Section, Education Department, County Hall, Taunton TA1 4DY.

Closing date 15th November 1985. (7882)

Instructor for Office Practice/Computer Literacy

Brent Training Workshop - funded under the MSC's Youth Training Scheme

£6,207 - £11,037 p.a. plus £1,017 (L.W. & Supplements)

(Barnham P.E. Lecturer | Salary scale with NJC Conditions of Service)

Brent Training Workshop is a 45 place Youth Training Scheme giving basic training in a range of skills. Most trainees are from black ethnic groups.

We are seeking to appoint, as soon as possible, a qualified or experienced instructor to teach computer literacy and office skills in groups of 6 to 8 trainees. The postholder should be able to develop young adults with a wide ability range and degrees of motivation.

Applicants should be qualified and experienced in office practice and typing (minimum standard RSA Stage II). Applicants must also have experience of word processing and data base management and be familiar with a range of computer applications in the office. Training experience is essential and some teaching or supervisory experience is desirable.

The successful applicant will need to demonstrate an understanding of, and commitment to the Authority's Multicultural Education and Equal Opportunities Policies.

Candidates are welcome to telephone the Manager, Mr. Vernon Richardson, for further information and informal discussion on (01) 452 3723.

Application forms and job descriptions from the Personnel Division, Room 1, Brent Town Hall Annex, Kings Drive, Wembley, Middlesex HA9 9BN returnable by 15th November, telephone 01 903 0371 (24 hour Answerphone service). Reference number E/759 must be quoted. (7518)

London Borough of BRENT

Brent is an Equal Opportunity Employer. Job sharers welcome.

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Brent is an Equal Opportunity Employer. Job sharers welcome.

Are you as keen to teach as our technicians are to learn?



We hope you're one of those teachers who thoroughly enjoys teaching. Who doesn't mind letting enthusiasm show. Because we have some very keen and responsible pupils for you to train.

Our pupils are the RAF's technicians of tomorrow. Some of the brightest and most highly motivated young men and women in Britain with a voracious appetite for learning.

But without dedicated teaching their careers wouldn't get off the ground. And without our technicians neither would the RAF.

Hence the importance of your role as a Royal Air Force Education Officer.

What's more, we'll give you every facility to fulfil that role effectively.

You see, we believe in "hands on" teaching. Giving each pupil the chance to get to grips with the machine. Be it an oscilloscope or a jet engine, he'll learn more, quicker, if he's working in a small group.

